

THE

# Soybean Digest



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**August 29-31**

See Page 9 for Details

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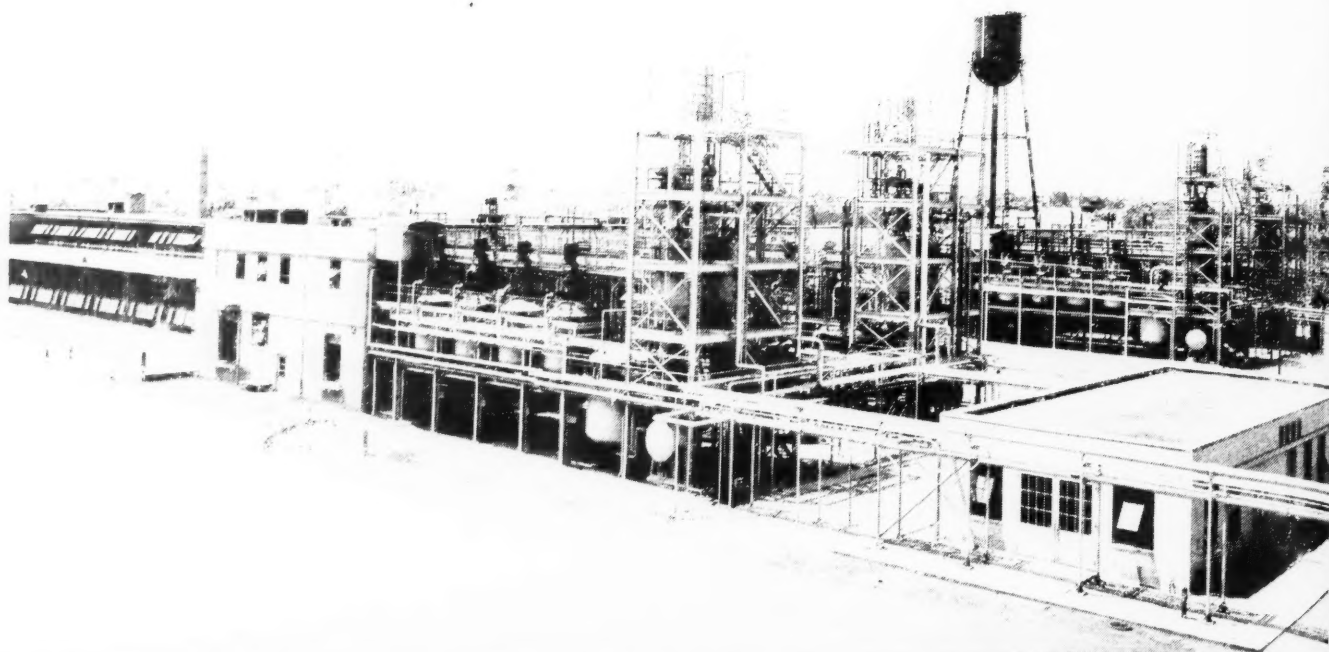
OF

THE AMERICAN SOYBEAN ASSOCIATION

VOLUME 6 • NUMBER 8



JUNE • 1946



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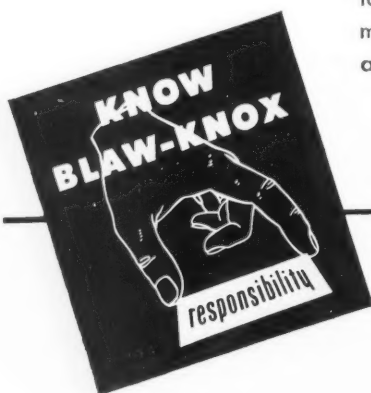
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# THE Soybean Digest

REG. U. S. PAT. OFF.

GEO. M. STRAYER, Editor

KENT PELLETT, Managing Editor

Publishers' Representatives: Ewing Hutchison Co., Chicago

Vol. 6

JUNE ☆ 1946

No. 8

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## IN THIS ISSUE

	Page
U. S. Has Oils Leadership .....	6
Processor Problems .....	8
R. B. ALSPAUGH	
26th Annual Convention .....	9
Hail Damage to Soybeans .....	10
Soybeans for Bobwhites .....	12
RALPH B. NESTLER	
Industrial Activity and Price .....	16
Soybean Acreage Down .....	17
David Breese Jones .....	20
Publications .....	22
Grits and Flakes .....	24
Staley's Annual Meeting .....	24
Sorensen Heads Oil Chemists .....	24
Washington Digest .....	28
PORTER M. HEDGE	
In the Markets .....	32

## The American Soybean Association

OFFICERS: President, Howard L. Roach, Plainfield, Iowa, Vice President, Walter McLaughlin, Decatur, Ill., Secretary, Geo. M. Strayer, Hudson, Iowa, Treasurer, J. B. Edmondson, Clayton, Ind.

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## EDITOR'S DESK

**The Crop Outlook** Preliminary crop reports, carried in this issue, indicate that the 1946 acreage of soybeans is definitely down from the 1945 figures, and that the announcement of the increased ceiling prices on corn, wheat and other small grains had a very definite effect upon the soybean acreage planted in some areas. On first thought it would appear that the quantity of soybeans which will be available for processing from the 1946 crop may be far below the 1945 figures. And the 1945 bushelage reaching processing plants was certainly far below the levels the crop reports issued from USDA indicated.

There are, however, some encouraging factors in the picture. Some of the acreage which might otherwise have been planted to soybeans was the marginal acreage—the lower producing acreage—some of which should not have been planted to soybeans anyway. A reduction of 10 percent in acreage would not necessarily mean a reduction of 10 percent in bushels produced.

Another factor which may have considerable influence is the shift in varieties in the central soybean belt. This year a large proportion of the acreage in that district will be planted to the Lincoln variety. This could mean an increase in the average yield from the same section of 3 or even 5 bushels per acre. Such an increase would go a long way toward offsetting the decrease in acreage which has been planted.

**Seen From Outside** "Soybeans will probably never figure prominently as an industrial raw material, simply because the farmer gets too much for his crop for it to compete against wood, coal, and petroleum," in the opinion of *Industrial and Engineering Chemistry*. "Soybean products are not by-products. Oil and meal will have to be co-developed because the industry is not in a position to operate on a by-product basis. The postwar future of soybean products, therefore, will continue to be in edible products."

Of course, *Industrial and Engineering Chemistry* ignores the considerable quantities of soy products that are already entering into industry. Its analysis of the situation, however, deserves consideration from the soybean industry, for it comes from an impartial source far enough outside our own industry to make an analysis which is not biased by trade beliefs.

Present price structures also influence current thinking and may change with the years.

**Just in Passing . . .** Central Soya's attractive little booklet, "Soybeans on Your Farm," answers a surprising number of questions on growing soys. . . . After lapsing a year, the Iowa Soybean Yield Contests are under way again and promise to be the best ever. The yield contest in your state is worth your participation.

# USDA'S SOYBEAN PRICE DECISION



An editorial in the May issue of *The Soybean Digest* explained the steps which were being taken at the time that issue went to press to secure a comparable increase in the ceiling price on soybeans. Ceiling prices on corn, oats, wheat and other grains had been increased from 10 to 25 cents per bushel.

Previous to that price announcement officers of the American Soybean Association, along with soybean processors, the National Soybean Processors Association, and members of the grain trade had implored with the Production and Marketing Administration officials, Secretary of Agriculture Anderson, and other influential governmental officials to raise the soybean ceilings at the same time. They did not choose to do so.

Efforts were then made to secure an increase in the ceiling price on soybeans, to be announced after the announcement on grains. That effort, also, was fruitless. A barrage of telephone calls, telegrams, messages to representatives in congress, and communications to officials in charge met with one reply—of which the accompanying letter is representative.

Unquestionably the United States is committed to feeding the people of Europe and Asia until a crop can be produced. It will take millions of bushels during the next few months. In order that we may supply these foodstuffs for the world, we must cut down on livestock populations. That reduction is taking place rapidly in some sections today—in the feed deficit areas—both east and west. The great Midwest has not yet felt the impact of the shortage. If the 1946 crops are good the Midwest may never reduce livestock populations to the levels anticipated. Higher ceiling prices are unquestionably moving feed crops to market through legitimate channels in greater quantities than previously.

The unanswered question, in many minds, is how fat and protein hungry peoples are going to be supplied with those commodities when the livestock population, and thus the lard supplies, are down; when cottonseed oil production is at the lowest ebb in years; when tropical oils such as coconut are not moving in world trade channels yet, and when soybean acreage is sliding downward rapidly.

The world can not be fed with starches alone. Fats—and proteins—are also required. NO OTHER ONE CROP CAN PRODUCE SO MANY POUNDS OF HIGHLY NUTRITIOUS EDIBLE OIL PER ACRE AS SOYBEANS. NO OTHER CROP CAN PRODUCE SO

MANY POUNDS OF HIGHLY NUTRITIOUS PROTEIN PER ACRE AS SOYBEANS. Production, by soybeans, of either of these two essential commodities is high enough to justify increased acreage, rather than decreased. WHEN THE SAME CROP PRODUCES THE GREATEST PER ACRE YIELD OF BOTH COMMODITIES, THERE SHOULD, IN THE ESTIMATION OF MANY PEOPLE, BE NO QUESTION ABOUT INCREASING, RATHER THAN DECREASING PRODUCTION.

Time will tell whether the decision of governmental officials was justified. Perhaps they are right. But perhaps the 1946-47 demand for oils and proteins will be even more acute than during the past year.

UNITED STATES DEPARTMENT OF AGRICULTURE  
Production and Marketing Administration  
Fats and Oils Branch  
WASHINGTON 25, D. C.

May 20, 1946

Mr. George M. Strayer, Secretary  
American Soybean Association  
Hudson, Iowa

Dear Mr. Strayer:

This is in reply to your telegram of May 8 addressed to the Secretary regarding the support price for 1946-crop soybeans.

We have been informed that no increase will be made in the soybean support price because of the increase in the ceiling price for corn. When the decision was made to increase grain ceiling prices it was anticipated there would be some shift in acreage from soybeans to grain crops and primarily to corn. It would be impossible for this country to meet its relief requirements from 1946-crop production and at the same time maintain livestock numbers and soybean acreage at wartime record levels. A choice had to be made between feeding starving people and maintaining this record production of other commodities. It was decided, therefore, to increase grain ceiling prices to encourage the movement of grain for shipment abroad, for human consumption in this country, and for essential livestock feeding purposes in deficit grain producing areas. Prices for other livestock feeds were comparably increased and we believe this action should help to bring about the proper balance between livestock numbers and available feed supplies.

Very truly yours,

GEORGE L. PRICHARD  
Chief, Oilseeds Division.

# Here are Eight Helps to Better Packaging for Your Soybean Products

The Bemis products shown on this page are a few of those with which we have served your industry for many years. The next time you need bags, bag closing supplies, or help with a packaging problem, call Bemis.



**Bemis Waterproof Bags**—Ideal for export or domestic shipments. They are tear-resistant, puncture-resistant, insect-resistant, siftproof, moisture-proof.



**Bemis Cotton Bags**—Made from high grade materials by expert workmen. Three Bemis mills make quality cloth especially for Bemis Cotton Bags.



**Bemis Burlap Bags**—Sewn with the Bemis close-stitch. Quality thread insures seams stronger than the burlap itself. Brilliant, multicolor printing.



**Bemis Bag Closing Twine and Thread**—Mainstay Twine speeds hand closing, is soft, easy to work. Bemis Special Thread speeds machine closing, is knotless.



**Bemis Deltaseal Bags**—An attractive consumer package retailers feature in counter and floor displays. Housewives like the easy-pouring, self-closing spout.



**Bemis Multiwall Paper Shipping Sacks**—Tough, siftproof, will withstand rough handling. Quality rigidly controlled throughout all manufacturing operations.



**Bemis A's**—Tough, long-lasting, non-raveling cotton seamless bags woven with more threads per inch for extra strength. Multi-trip bags—very economical.



**Bemis Flexicartons**—a consumer-size package that makes a compact, attractive container, adaptable to shelf and counter display. Retailers like Flexicartons.

# Bemis Bags

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UNITED STATES NOW HAS

# Fats, Oils Leadership

Technological leadership in production of fats and oils has passed from Germany to England and the United States, according to a report on the fat and oil industry in Germany and northwestern Europe, released by the Department of Commerce.

The report was made by K. S. Markley for the Joint Intelligence Objectives Agency.

Bombing and deterioration of equipment during the war reduced the German fats and oil industry to about half its former size, according to the investigator. Research laboratories in the industry were few in number and, in general, poorly equipped and understaffed, as compared with facilities in the American industry.

German production methods and products, however, are of interest because they differ markedly from American practices. To offset lack of imported oils during the war, the Germans subsidized cultivation of rape and mustard in northern Europe, and soybeans and sunflowers in central and southern Europe. Hazelnuts, walnuts, corn, wheat, and rye germs also were used as oil sources.

The report describes in detail European methods for oilseed processing, refining and hydrogenation, prevention of reversion of soybean oil, use of ethyl esters in mar-

garine, production of margarine, synthetic fatty acids and fats, industrial proteins, soaps, and detergents.

— s b d —

## INCREASE AUSTRALIAN SOYBEAN ACREAGE

About 10,000 acres of soybeans will be planted in Australia this year as a result of a trip of inspection of the U. S. soybean industry undertaken by Don Shand for the Commonwealth in 1945, Mr. Shand reports.

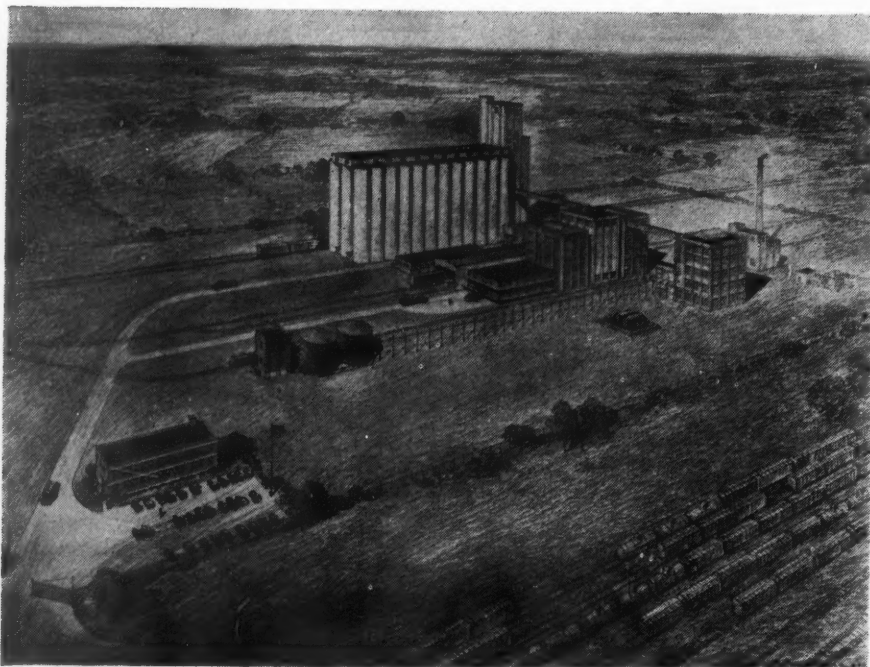
Prior to Mr. Shand's trip to the United States, total soybean acreage in Australia was in the neighborhood of 200 acres. The soybeans grown in Australia will be used for oil extraction and livestock feeding.

In a recent speech at a farmers' conference at Armidale, N. S. W., Mr. Shand said: "The story of the soybean is one which fascinates any visitor to the States. The work carried out by Dr. W. J. Morse (Bureau of Plant Industry USDA) and other prominent agriculturists has made a contribution to that nation which cannot be assessed in dollars, but only as one of the most humane efforts made by man to relieve the starving people of a war weary world.

"The soybean has meant much to America and can mean everything to the health of humans and animals in this country."

## New Spencer Kellogg Plant

This is the artist's conception of the new solvent plant of Spencer Kellogg & Sons, Inc., being erected at Bellevue, Ohio. The plant, located on the Nickel Plate and Pennsylvania railroads, will be ready to operate on 1946 soybeans. Elevator capacity will approximate 2 million bushels.



## Savings EFFECTED BY ST. REGIS PACKAGING SYSTEMS

### CASE HISTORY #1 . . \$5.71 per ton

saving on container . . . . . \$5.46  
saving on packaging operation . . \$ .25  
total saving . . . . . \$5.71

### CASE HISTORY #2 . . \$2.50 per ton

saving on container . . . . . \$1.32  
saving on packaging operation . . \$1.18  
total saving . . . . . \$2.50

### CASE HISTORY #3 . . \$1.80 per ton

saving on container . . . . . \$1.64  
saving on packaging operation . . \$ .16  
total saving . . . . . \$1.80

### CASE HISTORY #4 . . \$1.56 per ton

saving on container . . . . . \$1.55  
saving on packaging operation . . \$ .01  
total saving . . . . . \$1.56

### CASE HISTORY #5 . . \$5.06 per ton

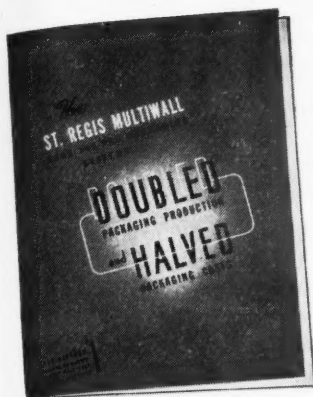
saving on container . . . . . \$3.56  
saving on packaging operation . . \$1.50  
total saving . . . . . \$5.06

Multiwall paper bags are now serving American industry in high-speed machine packaging of over 300 different chemical, food, fertilizer and rock products. These five "case histories" outline the detailed factual experience of leading concerns in the use of fast, cost-saving St. Regis Packaging Systems.

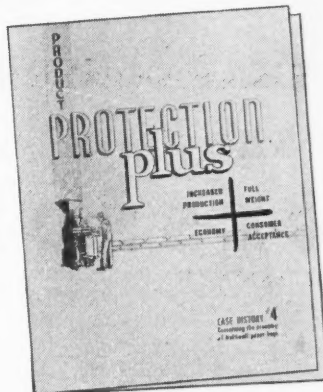
**WATCH THESE PAGES FOR FURTHER CASE HISTORIES**

SOYBEAN DIGEST

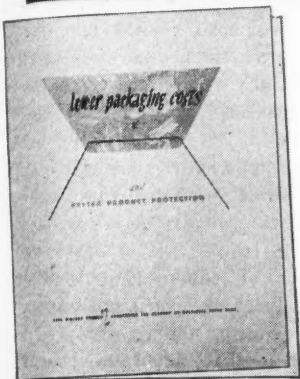
# THESE "CASE HISTORIES" SHOW HOW ST. REGIS PACKAGING SYSTEMS INCREASE PRODUCTION — REDUCE PACKAGING COSTS



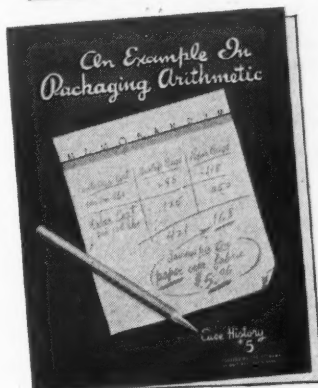
**1** manufacturer of ready mixed cake flours . . . installation of a St. Regis Valve-bag Packaging System raised production from 9,000 lbs. per hour to 18,000 lbs. per hour with no increase in labor costs.



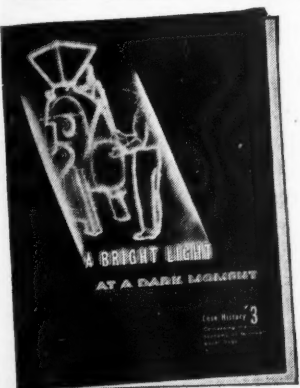
**4** prominent salt manufacturer increased packaging output 18% with the same crew by changing over to the St. Regis Valve-bag Packaging System . . . and effected a saving of 45% in overall packaging costs.



**2** several well-known fertilizer manufacturers were using eight men to pack burlap bags. St. Regis Valve-bag Packaging Systems enabled these companies to "up" production 20% per hour with only 5 men packing and handling.



**5** manufacturer of cocoa installed a St. Regis Valve-bag Packaging System. Result: an increase of 62½% in production, a saving in labor costs of 60%, a saving in container costs of over 55%.



**3** manufacturer of granite poultry grit formerly employed a 14-man crew to fill, sew and handle a maximum output of 60,000 lbs. per hour. Installation of a St. Regis Valve-bag Packaging System enabled poultry grit manufacturer to double production with smaller crew . . . reduce container costs 54.4%.

The "case histories" illustrated above have proved of great value to manufacturers throughout the country . . . perhaps they will be of equal value to your company. Write for the folders that interest you the most . . . or, if you would prefer to have a St. Regis sales representative talk over your specific problems with you, just 'phone or write your nearest St. Regis Sales Office.

Years of experience in the pioneering of automatic packaging in multiple-layer paper bags has enabled St. Regis to recommend the correct packaging system to suit the needs of manufacturers of over 300 different products including chemical, food, fertilizer and rock products. The coupon is for your convenience.



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(Sales Subsidiary of St. Regis Paper Company)

NEW YORK 17: 230 Park Ave.

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SAN FRANCISCO 4: 1 Montgomery St.

Without obligation, please send me full details regarding "Case Histories" outlined above.

No. 1 ☐ No. 2 ☐ No. 3 ☐ No. 4 ☐ No. 5 ☐

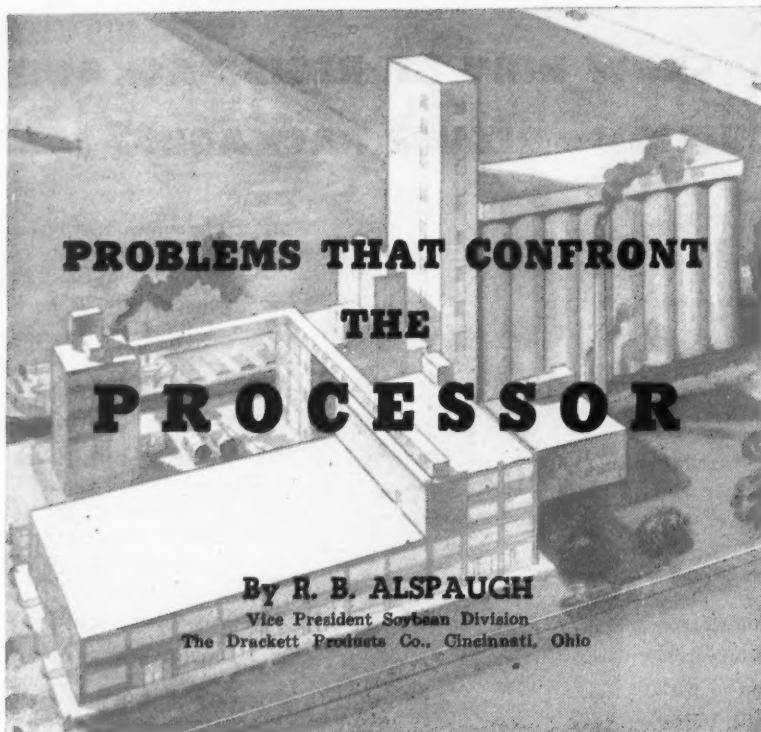
Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

Birmingham Boston Cleveland Dallas Denver Detroit  
Franklin, Va. Los Angeles Nazareth, Pa. New Orleans  
No. Kansas City, Mo. Ocala, Fla. Oswego, N. Y. Seattle Toledo

IN CANADA: St. Regis Paper Co. (Can.) Ltd., Montreal, Vancouver.



**B**EFORE such a group as this it is not necessary to repeat the story of the growth and development of the soybean industry since the early thirties up to the period immediately prior to the war. Likewise it is not necessary to review the development from 1940 to the present which assumed such astronomical proportions to make soybeans rank as one of the largest cash crops in Ohio.

The industry as a whole served gallantly on the war-food front. It has been suggested that the present soybean development and the use of soybean products may be considered, when reviewed in retrospect, as one of the outstanding technological improvements in our food industry.

Faced with the wartime emergency many phases of the production and commercial aspects of the soybean problem were handled on an expediency basis in view of the necessity of securing action within a short time. This ran the whole gamut, from the preparation of the seed bed, selection of seed varieties, to the harvesting of the crop. The growers' problems incident to the shortage of labor, equipment and seed appeared at the time as insurmountable barriers.

Bottlenecks were inevitable in the movement of beans from farms to elevators and then to the processor.

Hasty, but what appeared to be expedient decisions at the time, were necessary in connection with the distribution of meal and oil.

The same expediency programs during the war years are apparent in connection with commercial feed mixing operations and practices of feeders.

If we look at the industry at present, its accomplishments in many respects, in my opinion, overshadow in magnitude the many current problems raised by different interests—including growers, country elevators, processors, feed mixers and feeders. The industry's present level of production was attained in spite of the uncertainties and risks incident to expediency and the demand for quick action.

#### TAKE AN INVENTORY

The time has now come to take inventory of our present position. Here we are faced with the practical problems of expediting and implementing efforts already started from all segments of the industry, to take inventory of present methods and practices, and, to locate and eliminate any weak spots which are the inevitable result in such a period of expansion as the industry has just experienced.

Such a program of improvement should result in an adjustment of the industry's operation as a whole to meet the economic demands for the future.

Let me repeat—we have arrived at the present stage of development under the pressure of expediency and timeliness. Now, with reconversion imminent, some time beyond our present food emergency, is it not logical that we should turn to the motivating forces of careful and thorough research, to achieve product improvement and low cost operations at all levels in the industry?

Marshalling the forces of research to achieve product improvement and low cost operations will not only give the soy-

• Continued health of the soybean industry rests on the propelling power of research, products improvement and low costs. An address before the Conference of Processors and Agronomists at Columbus, Ohio.

bean industry its rightful position in the postwar era but will insure that the soybean contributes to its fullest extent to our general economic health.

Looking into the future, the position of the Ohio soybean industry depends upon the level of efficiency attained so as to insure a permanent position for the products of soybeans in our industrial system, and at the same time make the growing of soybeans a profitable operation to farmers.

Feeders are apparently more familiar than at any previous time with the proper balance between proteins and carbohydrates.

Any number of authoritative sources indicate our livestock population as a whole received during the prewar period about one-half of the protein supplement considered necessary for optimum results. This represents a sizable potential market for meal as a feed ingredient. Here the forces of research can be used for continuous improvements in quality to give soybean oil meal a permanent position as a feeding ingredient.

Then further, the propelling power of research has resulted in many new products from soybeans in various stages of commercial development — for example, to mention only a few; paints, plastics, fiber, glue, etc.

Authoritative data indicate the likelihood of continued dependence upon the domestic market for a large portion of our fat and oil supply for some time. As soon as we have an available supply more in line with demand, oil is likely to take its relative competitive position on a basis of price and efficiency in the production of finished oil products.

#### SOY OIL IS IMPROVED

Substantial improvement is reported in the quality of soybean oil delivered to oil processors and technological advancement has been made in the use of different oils. The volume of research now in progress gives reason to expect still further improvement in connection with the quality and use of soybean oil.

Efficient use of protein to give the ultimate consumer low prices on food products and the use of soybean oil to pro-

(Continued on page 13)

"INDUSTRIAL  
UTILIZATION OF  
SOYBEANS" THEME

26th Annual  
Convention  
of A. S. A.



USE THIS FORM

For your convenience in making hotel reservations for the coming meeting of the American Soybean Association August 29 to 31, in St. Louis, hotels and their rates are listed below. Use the form at the bottom of this page, indicating your first, second and third choice. Because of the limited number of single rooms available, you will stand a much better chance of securing accommodations if your request calls for rooms to be occupied by two or more persons. All reservations must be cleared through the housing bureau.

All requests for reservations must give definite date and hour of arrival as well as definite date and approximate hour of departure. Also names and addresses of all persons who will occupy reservations requested MUST be included.

Hotel	For 1 person	For 2 persons		2-room suites	
		Double Bed	Twin Beds	Parlor & Bedroom	
American	\$2.00—\$3.00	\$3.50—\$4.00	\$5.00	\$	\$
Claridge	3.00—4.00	4.00—6.50	5.00—6.50	10.00—	& up
Coronado	3.00—& up	5.00—& up	6.00—& up	8.00—	13.00
DeSoto	2.65—7.00	4.00—7.00	5.30—10.00	10.00	
Jefferson	3.50—5.00	4.50—6.00	6.00—8.00	12.00—	20.00
Lennox	3.00—5.00	5.50—6.00	5.50—6.50	10.00—	11.50
Lindell Plaza	2.50—4.00	3.50—5.00	3.00—5.00		
Majestic	2.00—2.25	2.75—3.25	4.00		
Mark Twain	2.75—3.50	4.00—5.00	4.50—5.50		
Mayfair	3.00—6.50	4.00—8.00	5.50—8.00	10.50—	& up
Melbourne	3.20—4.20	5.30—6.80	5.30—7.30		
Roosevelt	3.00	3.50	4.50		
Statler	3.50—5.00	5.00—7.00	6.50—9.00		

ALL RESERVATIONS MUST BE RECEIVED NOT LATER THAN AUGUST 14.

Housing Bureau, American Soybean Association  
910 Syndicate Trust Building, St. Louis 1, Mo.

Please reserve the following accommodations for the: American Soybean Association Convention in St. Louis, Mo., on August 29-31, 1946.

Single room \_\_\_\_\_ Double bedded room \_\_\_\_\_ Twin bedded room \_\_\_\_\_  
2 Room suite \_\_\_\_\_ Other type of room \_\_\_\_\_

Rate: From \$\_\_\_\_\_ to \$\_\_\_\_\_ First choice hotel \_\_\_\_\_  
Second choice hotel \_\_\_\_\_  
Third choice hotel \_\_\_\_\_

Arriving at hotel (date) \_\_\_\_\_ hour \_\_\_\_\_ A.M. \_\_\_\_\_ P.M. Leave (date) \_\_\_\_\_  
hour \_\_\_\_\_ A.M. \_\_\_\_\_ P.M.

The Name of Each Hotel Guest Must Be Listed. Therefore, please include the names of BOTH persons for EACH double room or twin bedded room requested.

Names and address of all persons for whom you are requesting reservation and who will occupy the rooms asked for:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(Individual requesting reservations)

Name \_\_\_\_\_

Address \_\_\_\_\_

City and State \_\_\_\_\_

If the hotels of your choice are unable to accept your reservation the Housing Bureau will make as good a reservation as possible elsewhere providing all hotel rooms available have not already been taken.

"Industrial Utilization of Soybeans" will be the theme of the 26th annual convention of the American Soybean Association at St. Louis, Mo., August 29, 30 and 31.

Speakers of worldwide fame will discuss their ideas of where soybeans are going in the postwar world. Foreign markets and human consumption will be spotlighted, and production methods and practices which will raise the yield of soybeans will be featured.

Commercial exhibits of companies supplying the soybean industry will be featured in the exhibition hall of the Hotel Jefferson, site of the convention sessions, with reservations of space already running far ahead of anticipated demand.

Among speakers who have already confirmed their appearance on the program are Dr. G. E. Hilbert, director of the Northern Regional Research Laboratory, Peoria; Dr. W. H. Goss, assistant to the director at the Laboratory; Dr. P. R. Henson, head of the Regional Soybean Laboratory varietal test work at Stoneville, Miss.; C. Kenneth Shuman, chairman of the crop improvement committee of the National Soybean Processors Association and director of nutrition for the Glidden Co.; Dr. Wm. B. Allington, head of the soybean disease and insect research being carried on by the Regional Laboratory; Edwin G. Strand, agricultural economist of the Bureau of Agricultural Economics, Washington, D. C.; and a representative of the Soy Flour Association.

Other subjects and speakers are being arranged to complete the first convention in the second quarter century of the American Soybean Association.

Full convention details will be carried in our July issue.

Because of the continued demand for hotel accommodations, early reservations are urged.

HOTEL JEFFERSON will serve as headquarters hotel. However, a number of other hotels are located nearby. All reservations must be cleared through the American Soybean Association Housing Bureau which has been set up to assure reservations to convention attendants with a minimum of inconvenience.

Fill out the reservation blank on this page and forward it to the Housing Bureau IMMEDIATELY. Only by so doing can you be sure of hotel accommodations.



These soybeans were completely destroyed by hail.

## 1945 PROGRESS REPORT

# HAIL DAMAGE TO SOYBEANS

• Look out for hail during the podding stage. That is when soybean crop yields may be hit hardest, these experiments with simulated hail injury indicate. They have been under way at Iowa State College since 1943.

**R**ESULTS obtained in 1945 from the soybean hail damage test at Iowa State College agreed very closely with results of the tests in 1943 and 1944, in so far as the tests for the 3 years corresponded, according to the 1945 report recently released.

Three different tests were conducted in 1945 instead of the single test of the two years previous.

The three tests involving simulated hail damage to soybeans carried out in 1945 included:

The general or overall hail damage test, same as 1944 except that only the Richland variety was used last year.

The stand reduction test, including only the removal of various percentages of the stand at different dates during the growing season.

The defoliation test. Various percentages of the leaves were removed at several stages during the growing season.

The hail damage tests have been under way at Ames since 1943 in cooperation with the U. S. Department of Agriculture and the U. S. Soybean Laboratory. Funds are furnished by a group of hail insurance companies.

The work is under the direction of J. C. Eldredge and Robert R. Kalton. The project has been expanded each year following 1943 in an attempt to answer some of the questions which arise following hail damage to the soybean crop.

### GENERAL TEST

In the general test the 1945 results for yield and other agronomic characters agree

very closely with those obtained in the two years previous.

The test consisted of three degrees of damage (light, medium and heavy) and the check (no damage). Each of these degrees of damage was inflicted at 10 different dates during the growing season on replicated rod-row (16 feet) plots of the Richland variety of soybeans. In 1943 only five dates of damage were included. The Lincoln variety was used also in 1944. Otherwise the test was identical all three years.

A description of the damage inflicted and the stage of growth at each date are shown in Table 1.

The attempt has been made in this type of damage to simulate as closely as possible actual hail injury. The type of damage inflicted caused leaf defoliation, removal of the growing points, removal of branches and parts of the stem, and various degrees of bruising. Hail storms may cause any one or all of these types of injury to soybean plants in the field.

Except for the simulated injury and for weed removal, the plots used in these studies were handled in such a manner as to approximate actual farm conditions.

Measurements of the following factors were or are being made for the 1945 test: yield of seed, maturity, plant height in inches, seed size, seed quality, lodging, oil and protein content of the seed, and iodine number of the oil.

As in 1943 and 1944 tests, yields decreased as the severity of damage increased. The greatest reduction in yield for any one degree of damage occurred at dates 6 to 8. (See Table 1). At these stages

pods were developing on the plants and flowering had practically ceased.

Agronomic characters other than yield also were affected by the varying degrees and dates of damage. Maturity was retarded by injury at dates before the full bloom stage, with medium or heavy damage. Light damage did not noticeably influence maturity. Damage after full bloom stage had little or no effect on maturity. Plant height was decreased the most at date 5 with medium and heavy damage and was very noticeable at all dates from 1 to 6 with heavy damage. Light damage had little or no influence on plant height. No definite trends were observed for lodging with any date or degree of damage.

Seed quality, which is important in determining market grade, became poorer as the severity of damage increased. Seed quality was poorest with heavy damage at dates 6 through 9. A reduction in seed size resulted from medium and heavy damage at dates 8 and 9. Light damage did not noticeably influence seed quality or seed size.

The general or overall hail damage test was planned so that each year the same degrees and dates (stages) of damage were used. A brief summary of the three year average follows:

Yield reductions became greater as the severity of damage increased. The greatest reductions in yield for any degree of damage occurred at date 7. At this stage pods were evident in all parts of the plants with the lower pods approaching full length and beans becoming noticeable in them. Damage at the last two dates (9 and 10) was primarily mechanical, in that reduction in yield at these dates was due primarily to pod removal.

Medium damage from dates 1 to 5 and

**Stems were badly bruised and broken. Leaves have begun to grow out again.**



SOYBEAN DIGEST



New stems have been put forth after original main stems were broken off by hail.

heavy damage from dates 1 to 6 had a marked effect on maturity. Medium damage before bloom stage retarded maturity 3 to 4 days on the average and heavy damage more than a week. All degrees of damage at dates 9 and 10 hastened maturity somewhat by speeding leaf drop and promoting faster pod drying.

Plant height was effected the most by damage at dates 1 to 6, with heavier damage giving the greatest reductions in height. Damage at dates 4 and 5 was the most effective in decreasing plant height for all degrees of damage. As for the amount of lodging, nothing could be deduced from the 2 and 3-year averages.

Quality of the seed became poorer as the severity of the damage increased. In general, seed quality was poorest when damage was inflicted during the time of pod and bean formation (dates 6 through 9). The effect on seed size, which is one of the determining factors in seed quality, was similar to that of seed quality. Damage at dates 8 and 9 caused not only a noticeable reduction in seed size but also a large number of shrunken seeds. Heavy damage at date 8 caused a reduction of about 25 percent in seed sizes.

Chemical composition of the seed is available from only the 1944 test. Protein and oil content of the seed and iodine number of the oil were determined from composite samples. No definite effect on protein content was evident.

However, there was a marked effect on oil content and iodine number of the oil. Medium damage at dates 8 and 9 and heavy damage at dates 6 through 9 caused a marked reduction in oil content of the seed. The reduction was greatest from heavy damage at date 8, being almost 3 percent below the check.

The effect on iodine number of the oil was just the reverse. All degrees of dam-

TABLE 1  
Degree of Damage, Date of Damage, and Stage of Growth at Each Date of Damage. General Hail Damage Test

- A. Description of Damage Inflicted at Each Date
1. **Light**—20-30 percent leaves removed; 0-2 percent plants broken over; 2-5 percent of growing points removed; minor stem bruising incidental to leaf removal.
  2. **Medium**—45-65 percent of leaves removed; 3-5 percent plants broken down as a result of bruising; 5-15 percent growing points removed; plants bruised with one blow.
  3. **Heavy**—First date all plants cut off above cotyledon; at succeeding dates 80 to 90 percent leaves removed; 30-50 percent growing points removed; dates 2-5 about 5-15 percent of plants broken down; dates 6-10 about 3-10 percent plants broken down. Plants bruised with two blows.
  4. **Check**—No damage.

B. Stage of Growth at Each Date.

No.	1945 Date	Height	General Description
1	June 22	4-6"	First trifoliate leaves completely unrolled, second ones just unrolling.
2	June 30	7-9"	Three trifoliate leaves unrolled, fourth one unrolling. Fifth one in bud stage.
3	July 11	12-14"	Average of six trifoliate leaves unrolled. Few flowers noted.
4	July 19	15-18"	Seven to eight trifoliate leaves unrolled. Some stem branching. 50-75% plants flowering.
5	July 26	21-24"	Eight to ten trifoliate leaves unrolled. More stem branching. Full bloom stage.
6	August 6	27-28"	Pods well formed in bottom half of plants. Almost through blooming.
7	August 15	31-33"	Pods plainly evident at top of plants. Flowering ceased. Lower pods nearly full length with beans developing.
8	August 28	34-36"	Top pods full length. Pods in lower half of plants at edible stage.
9	Sept. 6	34-36"	Bottom leaves just starting to turn yellow. Beans in top pods at edible stage.
10	Sept. 15	34-36"	Lower pods turning yellow. Thirty to fifty percent of leaves have turned yellow with few falling.

age at dates 6 through 9 raised the iodine number. This was proportional to the amount of damage inflicted. The largest increase in iodine number came at date 8.

The 1945 results on chemical composition are in the process of being determined.

The 2 and 3-year average results for these simulated hail studies with soybeans have indicated that other characters as well as yield are adversely affected by the simulated hail injury. It appears, therefore, that several factors must be considered in determining the overall effect of simulated hail injury. This is emphasized in these results by heavy damage at date 7, which not only gave the greatest reduction in yield but also caused poor seed quality, smaller seed size, much shrunken seed, and a lower oil content of the seed.

HAIL DAMAGE STAND REDUCTION TEST

One of the characteristic features of many hail storms is the complete cutting off of various portions of the soybean plant. This test was set up, therefore, in an attempt to measure the effect on yield of seed and other characters of various amounts of stand removal at several stages during the growing season. Three percentages of stand reduction (25, 50, and 75) and the check (no stand reduction) were used.

Plants, or parts of plants, were removed at two heights. One was ground level and the other at approximately half the height of the plant. Each height and percent of stand reduction was at five different dates

throughout the growing season. These dates correspond to dates 1, 3, 5, 7, and 9 in the general hail damage test. (See Table 1). Replicated rod-row (16 feet) plots of the Richland variety were used.

The results obtained show a marked difference in yield for the various amounts and dates of stand reduction. Mean yields for all heights and dates of stand reduction decreased progressively from check to 75 percent stand reduction. Cutting the plants off at the ground caused a consistently greater decrease in yield than cutting them off at one-half the height of the plant. The average difference in yield between the two heights of stand reduction increased with the percent of stand reduction. The greatest decrease in yield came from cutting off 75 percent of the plants at ground level on date 9.

Little or no effect of stand reduction on other agronomic characters was noted.

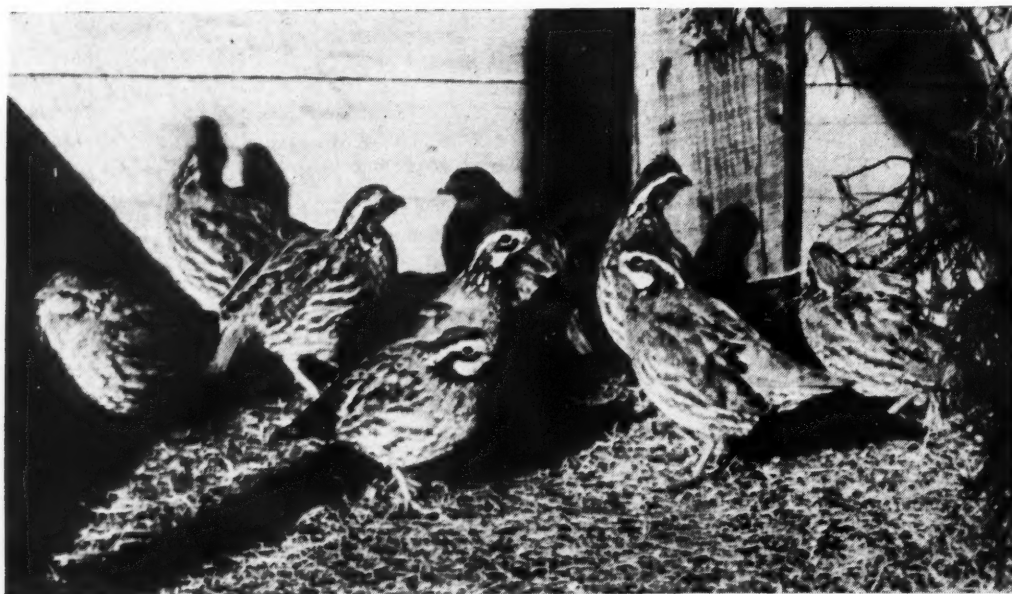
HAIL DAMAGE DEFOLIATION TEST

The hail damage defoliation test was to specifically study the effects of defoliation only on the agronomic characteristics of soybeans and on the chemical composition of the seed. Six percentages of leaf defoliation were included in this study: 0, 10, 25, 50, 75, and 100 percent. The leaves were removed as accurately as possible from replicated 8-foot rows of the Richland variety at five different stages of growth. These stages correspond to dates 1, 3, 5, 7, and 9 in the general hail damage test. (See Table 1).

Results show that there was a progres-

(Continued on page 13)

# SOYBEANS for BOBWHITES



By **RALPH B. NESTLER**

U. S. Fish and Wildlife Service

**B**OBWHITES like soybeans. When given the opportunity in the wild, quail have been known to eat large quantities of the "miracle bean." H. L. Stoddard in his famous book, "The Bobwhite Quail," reports finding on one occasion eight quail that had made soybeans 74 percent of their last meal, and at another time a group of four birds that had fed on soys exclusively.

It may take bobwhites some time to learn to eat this exotic food after its introduction within their feeding area. Close observing farmers and sportsmen alike have noticed that fields of soybeans planted in a region for the first time may not be frequented by quail until the second, or even the third, season, but then be occupied by several coveys almost simultaneously. Bobwhite's hesitancy to accept the new bean is not a disparagement of this wonderful legume, but merely a cautious attitude assumed by him towards all foods with which he is not familiar.

There is much yet to be learned of the relative merits of the numerous soybean varieties for quail-food. The Wilson black soybean, however, seems to be well accepted. It is believed that in many cases soybeans should be substituted for the indigenous cowpeas, inasmuch as the former is preserved better both in the pods and on the ground. Like most quail foods, soybeans ought to be planted in long narrow strips adjacent to good cover.

Soybeans also hold a very important place in the diet of bobwhite quail propagated in

captivity. In fact, it stands out as the No. 1 protein concentrate of plant origin.

## SOYBEAN AND FISH MEALS MAKE GOOD COMBINATION

In 1941 experiments were conducted with 1,363 baby quail at the Patuxent Research Refuge, Bowie, Maryland, to compare various protein concentrates as components of growing-diets. All the diets were so formulated as to furnish 28 percent of crude protein and comparable levels of minerals and vitamins. An endeavor was made to use only one protein supplement in each diet, but the high mineral content of all the animal-source supplements, save dried buttermilk, was a limiting factor. None of these could be used as sole protein supplements because of the comparatively large quantities of calcium and phosphorus they contained. Therefore, they were supplied only at such levels as to maintain the desired mineral content of the diets, and the resulting deficiency in crude protein was made up with soybean oil meal. Thus, soybean oil meal comprised 10 to 48 percent of eight of the 11 diets being compared.

Chicks survived and grew more successfully on diets containing either soybean oil meal or peanut oil meal as the sole protein supplement in the diet than on diets containing either linseed oil meal, cottonseed oil meal, or dried buttermilk, as the main source of protein. All the chicks died on the last mentioned diets, whereas 45 percent of the 98 on soybean oil meal and 34 percent of the 97 on peanut oil meal, survived. At the end of five weeks quail on soybean oil meal averaged 49 grams; those on peanut oil meal, 46 grams.

The protein combination that gave the heaviest weights (68 grams), lowest mortality, and the highest efficiency of feed utilization, was one of soybean oil meal, 26.6 percent, and sardine fish meal, 14.0 percent. The second best combination was a mixture of 36 percent soybean oil meal and 9 percent menhaden fish meal.

When given a choice of the various diets the birds showed preferences for the one containing either 49 percent peanut oil meal, a mixture of 38 percent soybean oil meal and 9 percent meat and bone scraps, or a mixture of 42 percent soybean oil meal and 16 percent dried buttermilk.

## SOLVENT PROCESS OIL MEAL PROMISING

In 1942, when the United States were beginning to feel the effects of the war through a growing scarcity of foods and other commodities, the research workers at Patuxent Research Refuge endeavored to find a diet for growing quail that would not contain war-restricted ingredients, yet be equal in feeding value to the best diet found during the previous year. Ten diets were compared on 784 bobwhite chicks. The diet that seemed most promising from the standpoint of survival, bird weights, and efficiency of utilization was as follows (parts by weight): ground yellow corn, 26.08; ground millet, 10.00; dehydrated alfalfa leaf meal, 7.50; solvent-processed soybean oil meal, 50.00; dried whey, 3.00; special steamed bonemeal, 1.50; ground limestone, 0.80; salt mixture, 1.00; and D-activated animal sterol, 0.12.

At the end of 10 weeks the results from this diet, half of which consisted of soy-

bean oil meal, compared favorably with that containing a mixture of soybean oil meal and sardine fish meal:

Protein Supplement		
	50% soy meal	Soy and fish meals
Survival, percent	71	80
Bird weight, ave. in grams	144	145
Feed consumed per bird-day (grams)	6.8	7.4
Feed consumed per gram gain in weight (grams)	3.8	3.9

The above given formula using soybean oil meal as the sole protein concentrate differed from the one of the previous year by (1) the use of solvent-processed meal instead of expeller-processed meal, (2) the increase of the level of alfalfa leaf meal from 5 to 7½ percent, (3) the inclusion of 3 percent of dried whey, and (4) the substitution of 0.12 percent of D-activated animal sterol for 0.3 percent of vitamins A and D feeding oil fortified.

When expeller-processed soybean oil meal was used instead of the solvent-processed meal in the new formula, the results were less satisfactory. At the end of 10 weeks only 60 percent of the birds survived, and their average weight was 138 grams. The substitution of ground wheat for ground millet in the formula, however, produced equally good results.

With the use of D-activated animal sterol as a source of vitamin D, and a good grade of alfalfa leaf meal with yellow corn as a source of pro-vitamin A, the omission of fish oils from the diets did not cause avitaminosis. Nevertheless, because of the instability of carotene in storage it is advisable to include at least 0.30 percent of fortified oil in the diet.

SOY MEAL'S VALUE FOR OTHER GAMEBIRDS

Soybean oil meal is a valuable food for other game species besides quail. Pennsylvania workers in 1940 made public "An Improved Ration for Starting Ring-necked Pheasants" that contained 19½% soybean oil meal. Later work on "War-time Rations for Pheasant Chicks" gave evidence that eight diets containing soybean oil meal at levels ranging from 17½ to 40 percent were "excellent for rearing." Thus the "miracle bean" is winning—in fact, has already won—its place not only in the economy of agriculture, but also in the conservation of America's natural heritage.

ALSPAUGH

(Continued from page 8)

duce acceptable fat and oil products can be achieved only by the power of research, product improvement and low costs.

This motivating power of research, product improvement and low cost must be carried back from a finished product through the entire commercial channel to

the farmer raising soybeans.

And then we come to the problem of profitable raising of soybeans—and here again we must start the propelling power of research—product improvement and low costs in relation to all phases of farming practices in the raising of soybeans, including, to mention only a few:

- 1. The more efficient varieties
- 2. Preparation of soil and seed bed
- 3. Method of planting
- 4. Cultivation and weed control
- 5. Inoculation and fertilization
- 6. Soybeans in rotation

If we can get into the hands of farmers authenticated scientific information on all phases of cultural practices for soybeans we will have moved in the right direction to establish the soybean industry so far as one phase of it is concerned on a sound basis.

If we move in this direction promptly we will have served Ohio farmers in another way, namely to the extent that Ohio farmers have experience in raising soybeans by efficient cultural practices they will be in a position to better appraise just how soybean raising fits into the ultimate post-war adjustment facing Ohio agriculture.

HAIL

(Continued from page 11)

sive reduction in mean yield from no defoliation to 100 percent defoliation. The greatest reduction in yield occurred at date 7, with 100 percent defoliation. Reduction in yield for any of the other percentages of defoliation also was greatest at date 7. The reduction in yield at dates 1 and 3 was insignificant for all percentages of defoliation, except 100 percent.

Maturity was effected very little by defoliation. There was a slight tendency for defoliation at dates 7 and 9 to hasten maturity, especially with the higher percentages of defoliation. Plant height was affected only by 100 percent defoliation, with a noticeable decrease in height at dates 3 and 5. Practically no effect was evident on lodging or seed quality. Seed size was markedly reduced at dates 7 and 9 with 75 percent and 100 percent defoliation.

The results from the stand reduction and defoliation tests in 1945 compare favorably with the results obtained in the general or overall test. It appears that stand reduction and defoliation are two of the main factors contributing to the injurious effect of simulated hail injury to soybeans. A third factor, bruising, is encountered only in the general test.

The greatest effect on yield and other characters results when a combination of defoliation, stand reduction, and bruising is inflicted at the same time, as in the general test.

Similar studies on the effect of simulated hail injury to soybeans will be continued in 1946. It is expected that at the end of the 1946 season the period of years data will be summarized, a report prepared and published, and the study terminated, Eldridge and Kalton state.

The operations of the Copra Export Management Co. (CEMCO), set up to rehabilitate the war devastated copra industry in the Philippines, will be terminated June 30, U. S. Department of Agriculture has announced.

# Soy



## Cargill

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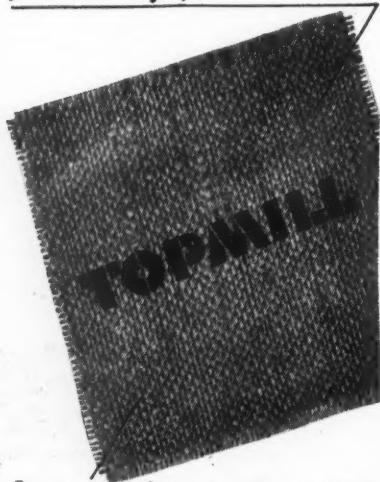
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## BETTER VARIETIES NEEDED IN TROPICS

Extensive cultivation of soybeans in the lowlands of tropical America will have to await the development of better adapted varieties, in the opinion of V. C. Dunlap of the research department of the Tela Railroad Co., La Lima, Honduras.

"Our experience here has been limited to small tests of varieties grown experimentally and two or three attempts to grow the crop on a field basis," says Mr. Dunlap.

"We have tried out Seminole, Avoyelles, Mamloxia, Otootan, Laredo, Burnette, Georgian, Missoy, Magnolia, Monetta, Creole, Palmetto, Nanda and Puerto Rico No. 8.

"Although several varieties, Avoyelles, Mamloxia, Puerto Rico No. 8, Seminole,

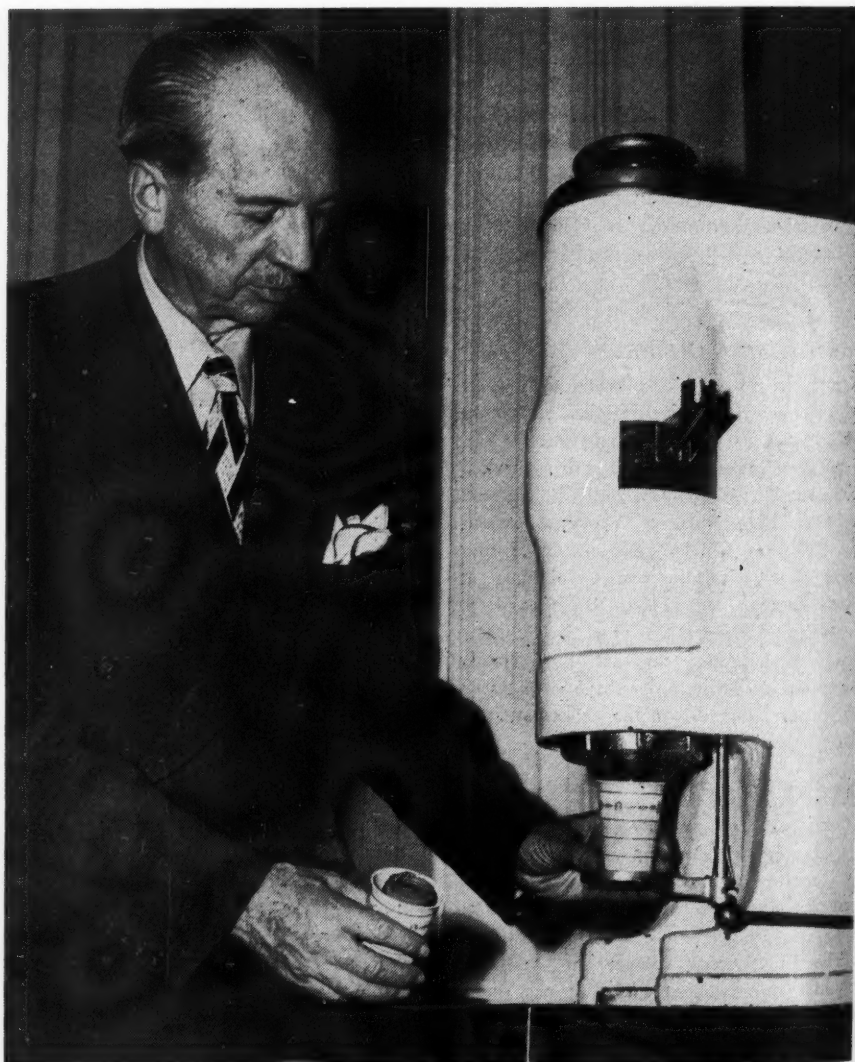
Otootan and Laredo grew and produced well in well cultivated and irrigated experimental plots, we have failed to grow any variety in large scale work depending on local rainfall and with ordinary cultivation. This has been due in great part to the uncertainty of the seasons here. If planted when ordinarily rains could be expected and an extended period of drought follows, the seed is lost. On the other hand, if very heavy rainfall occurs, as is usual here in the wet months, the seeds rot or the young plants if started appear unhealthy and are smothered with weeds. Due to excessive moisture it is impossible to use mechanical cultivation at such times."

Mr. Dunlap says he has seen fair crops of soybeans in fields of a few acres in Guatemala, the Dominican Republic and elsewhere in Central America.

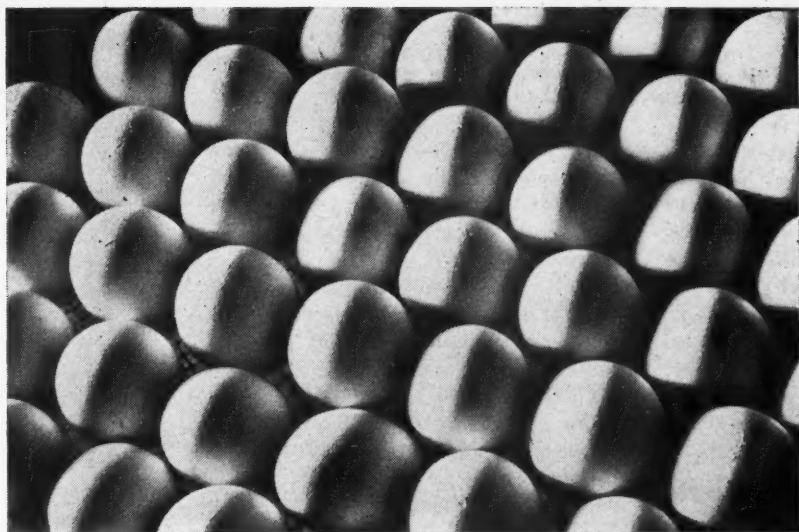
## Frozen Soy in 20 Seconds!

A machine that produces a frozen food from a mix of soy flour and fruit juices or chocolate in 20 seconds is demonstrated by Julius Keller, Jr. He and his partner, Frederic Reykahn, both of Los Angeles, Calif., are seeking a manufacturer for the machine, which was designed by Ernest E. Lindsey, inventor of the automatic doughnut machine. The machine maintains a temperature of 20 degrees below zero. The food is produced without the addition of sugar, the only sweetening being in the fruit juices. Federal law prohibits the product being called ice cream.

—Des Moines Register.

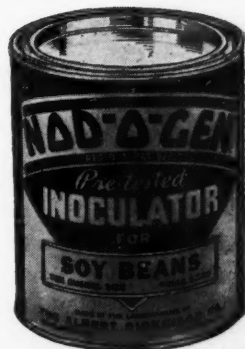


SOYBEAN DIGEST



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treatment sizes. Kills ugly weeds, but won't harm most common lawn grasses.

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Other profitable items from Dickinson include the Hormones, Ford Motor's Ammonium Sulphate, Spergon to prevent seed decay, Barbak for treating seed corn, Sudbury Soil Testers, Du Pont seed treating materials — Ceresan, Arasan, Semesan Bel, etc. Write for further information.

*Farm Laboratory Division*

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## INDUSTRIAL ACTIVITY WILL DETERMINE

# Price for Soybeans

The amount of national industrial activity will be one of the most important guides to soybean oil and oil meal prices in the years ahead, according to O. H. Brownlee, assistant professor of agricultural economics at Iowa State college, in March *Iowa Farm Economist*.

Dr. Brownlee contributes the article to the current debate on the probable permanent postwar soybean acreage. The article discusses Iowa production but applies to other leading soybean producing states.



"This is the way one of our more recently acquired customers looked just before he contacted us. We admitted that we do supply good stout bags for Soybeans, Meal, Feed and Flour; and that our plants at New Orleans, Savannah, and Houston give good service. He was relieved, and we helped with the best solution to his problem, and thought we'd better remind you too —



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The author believes that farmers' wartime experience with livestock feeding may lead them to pay more for proteins compared with feed grains than was the case before the war.

He forecasts the soybean price may range from 50 cents to \$2 a bushel depending on whether the industrial condition is one of full employment or serious depression.

Concerning yields of soybeans and competing crops, Brownlee predicts that Iowa soybeans may average as high as 24 bushels per acre during the next 5 years, as compared with 19½ bushels during the war. The increase will come from adoption of better varieties and cultural practices.

This will place soybeans in a better position to compete with corn for acreage but in a poorer position to compete with oats, since oat yields will increase even more than soybean yields.

Concerning the effect of soybeans on succeeding crops and on the soil, Brownlee states: "Farmers have generally believed that land on which soybeans have been grown washes more than land on which corn has been grown. . . . Soybeans leave the soil 'ashy'.

"Soil specialists, however, point out this 'ashy' condition may work in favor of the soybean. The looseness of the soil permits the water to permeate the soil easier than it can on the hard soil following corn. Tests show that soil losses from land on which soybeans have been grown are not larger and may be smaller than those on corn land. Once this information has been more widely disseminated, farmers' attitudes toward soybeans may improve."

Brownlee estimates an Iowa acreage of between 1 and 1.8 million acres compared with 2 million acres during the war years. With an average yield of 24 bushels, this would mean a yearly state production of between 24 and 43 million bushels. The Iowa total in 1945 was 34.8 million bushels.

— s b d —

## UNSUCCESSFUL SOYBEAN TRIALS IN BELGIUM

Experiments with soybean culture have not been too successful to date in Belgium, C. Journee and F. Tilkin report in an article in *Bull. Inst. Agron. et Stat. Recherches*.

Chief problem seems to be finding varieties adapted to conditions in Belgium. Of 66 varieties tested at the Institut in 1939, only nine matured in time to be harvested, and none were very productive.

The authors conclude from their experiments that while soybeans can be grown in Belgium, their inclusion in the rotation should not be recommended until better varieties are found.

## LINK-BELT CO. HAS COMPLETED 70 YEARS



WILLIAM D. EWART

Link-Belt Co. is celebrating the completion of 70 years, having been incorporated as the Ewart Manufacturing Co. in Chicago in 1875.

The firm had its inception, however, with the invention of the first readily detachable link-chain by its founder, William Dana Ewart, who was then a farm implement dealer at Belle Plaine, Iowa.

From a small beginning, Link-Belt has grown into an organization that did a 70 million dollar business last year. Today the firm's products are used in connection with an endless list of industrial operations.

An interesting history of the organization is included in the firm's annual report for 1945.

— s b d —



A system of mounting implements ahead of the driver's seat on Allis-Chalmers tractors assures clear vision for the operator. Planter, cultivator and fertilizer attachments are all mounted on the same frame.

## A-C FEATURES FRONT MOUNTED IMPLEMENTS

Again rolling off the assembly lines is the Allis-Chalmers Model C "self-greasing" tractor, equipped with sealed reservoir bearings which keep the tractor automatically greased.

Another feature is the Allis-Chalmers system of mounting tractor implements ahead of the drivers' seat. This front-mounted position of implements makes possible more accurate planting, cultivating and fertilizer placement, by permitting the operator to look ahead rather than behind. Planter, cultivator and fertilizer attachments are all mounted on the same tractor frame, and are far enough ahead so the driver can watch the row without turning or twisting to look behind. Implements are quickly attached and detached.

SOYBEAN DIGEST

# National Drop in Soybean Acreage

Cuts in soybean acreage in several of the leading soybean producing states are definitely indicated by *Soybean Digest* correspondents in their June 1 reports.

Indications are that the drop in acreage will be most severe in Iowa where a cut of up to 25 percent is reported. The largest wartime increase in soybean production took place in Iowa.

Illinois may see a 20 percent reduction, Ohio and Indiana from 10 to 20 percent. Soybean acreage in Missouri and Arkansas should hold its own, according to reports.

June 1 reports from correspondents follow:

## ARKANSAS

*Tildon, Easley, extension agronomist, Little Rock:* Planting date late in part of state. Difficult to estimate overall percentage planted. Should be as much or more soybean acreage planted than 1945 if weather permits full planting. Weather conditions part of state very unfavorable due to excessive rains. Perhaps an increase of Ogden variety and small introductions of Volstate and Roanoke and a few other strains recently released.

*Jacob Hartz, Stuttgart, Ark. for east half:* Planting later than normal. Acreage 90% of 1945. Unprecedented rains during May. Increase in mill varieties this year.

## ILLINOIS

*Walter W. McLaughlin, Citizens Bldg., Decatur, for vicinity:* 40% of crop planted. Acreage 80% 1945. Increase in corn ceiling prices cut down bean acreage. Weather wet. Increase in Lincolns planted.

*J. E. Johnson, Champaign, for Champaign and adjoining counties:* Planting 1 week to 10 days late. 40% planted. Acreage at least 6% below goals. Increase in corn ceiling resulted in cut in soybeans. April very dry. May had some rainfall 18 of 31 days, temperature very cool. More Illinois than in 1945. With delayed planting, anticipate increase in Richland variety. Very small amount of soybean seeding until last week. Growers much disappointed with no encouragement for an upturn in soybean price which is out of relationship with corn, oats and wheat.

*Russell C. Davis, Clayton, for west central:* Planting 10 days late. 10% planted. Acreage considerable below 1945. Wet May, but dry since May 24. More Lincolns than 1945.

## INDIANA

*Peter J. Lux, State AAA, Indianapolis:* Planting date 5 days late. 10% planted. Probable 1946 acreage about 82% of 1945. 80% of the reduction caused by change in corn ceiling. Weather wet and cool. More

Lincoln, Illini, and Richland varieties being used.

*J. B. Edmondson, Clayton, for south central:* 60-70% planted. Wet weather held up all plantings for weeks. Drop of 15-20% under 1945 acreage possible. Late plantings do not stimulate soy acreage as formerly since hybrid corn will mature as quickly. Increase in corn ceiling has definitely dampened enthusiasm for soybeans. Lincoln variety has gained almost universal acceptance. Seedbeds in wonderful condition. Weeds being eliminated. This the fourth season of late planting due to weather and record crops have resulted. Maybe we're learning something about the right time to plant.

*K. E. Beeson, Indiana Corn Growers Association, West Lafayette:* Soybean acreage will be reduced. For 4 years including 1946 rainy weather about May 20 delayed corn planting till late May and early June. Few soybeans planted preceding that date, and with delays in planting corn, soybean planting is being further delayed again this year. A few reports received that oats are being plowed up to be planted into soys.

## IOWA

*O. N. La Follette, executive secretary Feed Institute of Iowa, Des Moines:* 65% or more planted. Beans will go in fast this week as corn about all planted. Looks like a 25% reduction in soybean acreage due to corn price increase. Weather conditions average good but need warmer weather. Heavy trend to Lincoln in southern Iowa. Greater concern for good varieties prevailing over Iowa—Lincoln, Richland, Earlyana, etc. A great step forward since the day of "McClave".

*Howard L. Roach, Plainfield, for northeast:* 75% of crop planted. Acreage 75% as compared to 1945. Increase in corn ceiling has decreased soybean acreage. Weather conditions good.

*State AAA, Des Moines:* Planting date 1 week early in north, normal in south. 85% planted. Acreage 75% of 1945. Increase in corn ceiling lowered bean acreage 15%, weather conditions 10%. 70% soybean acreage southern half now devoted to Lincolns.

*Francis A. Kutish, Department of Agricultural Economics, Iowa State College:* Some reduction in soybean acreage will result from increase of corn ceiling.

## KANSAS

*E. A. Cleavinger, extension division, Kansas State College, Manhattan, for eastern:* Planting date 10 days early. 60% planted. Very early spring, very dry to date. Hesitation fly in wheat will cause increase in soy-

bean acreage. Gibson and Chief have been added to recommended varieties but few acres of these varieties planted due to low seed stocks.

## MARYLAND

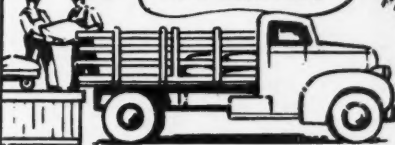
*Edw. C. Jenkins, administrative assistant, Production and Marketing Administration, for Eastern Shore:* Acreage for beans for all purposes slightly under 1945. Very few soybeans grown for beans outside of Eastern Shore. Increase in feed prices may cause more home grown feed. Tendency in 1946 may be away from oil varieties.

## MINNESOTA

*W. G. Green, Lakefield, for southwest:* Planting date a little earlier than normal.


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90% planted. Acreage about 20% above 1945. Farmers expecting advance on beans. Some early beans froze and had to be re-planted. Soil and moisture conditions very good.

*N. C. Beiter, Farmer Seed and Nursery Co., Faribault, for central and southern:* 95% planted. Acreage not much changed from 1945. Weather as freakish as the politicians in Washington, but quite favorable now. No change in sale of varieties—Habaro, Richland, Mandarin, Manchu, Earliana.

*John W. Evans, Montevideo, for south-west central:* Planting date normal or slightly delayed. 50% planted. 10% acreage increase over 1945. Too much rain for field work. Trend toward earlier varieties.

#### MISSOURI

*Donald Pemberton, Missouri Soybean Co., Caruthersville, for southeast:* Planting date slightly later than normal but earlier than 1945. 80% planted. Soybean acreage 120% of goals, 85% of 1945 which was excessively large due to loss of cotton acreage. Weather cold, wet. No considerable damage to bean crop yet. Ral soy principal variety but Ogden rising rapidly.

*J. Ross Fleetwood, extension specialist Missouri College of Agriculture:* Planting date normal but earlier than last 2 years. 30% planted. Acreage somewhat lower than 1945 because of ideal weather for planting corn and oats thus reducing acreage available. Weather ideal except for rather heavy rains in some sections during May.

#### NEBRASKA

*Fremont Cake & Meal Co., Fremont, for east central:* Planting date normal. 75% planted. Acreage about 15% below 1945. A larger portion of crop will be Lincolns.

*A. E. Anderson, Lincoln:* Planting date earlier than normal. Effort being made to reach crop goal. Weather conditions very favorable.

*John Slatensek, agronomist, Lincoln, for east central:* Bulk of crop planted last 2 weeks in May. Government goal will not be reached. Acreage about same as last year. Greater reduction in soybean acreage as result of failure to advance price

along with corn averted only by reluctance of farmers to change plans at last minute. Effect greater next year if price relationships continue. Rainfall below normal so far. Acreage of Lincolns increased.

#### OHIO

*G. M. McIlroy, Irwin, for west central:* Weather wet. Only 10% beans planted June 1. Acreage 10-20% under goal if rains were to stop today. Present continued wet weather upsets all calculations which might have seemed reasonable with normal weather conditions. More rain will mean a return to soybean planting of some fields which were intended to go to corn after increase in corn price.

*D. F. Beard, extension agronomist, Ohio State University, Columbus:* Some beans will be much earlier than normal, but most of crop yet unplanted due to interruption by heavy rains. 1946 acreage down 12-15%. Increase in corn ceiling had very depressing effect on soybean acreage. Continued wet weather which will delay corn planting will be greatest deciding factor on soybean acreage now. Richland acreage will drop some. Lincoln and Earliana will increase greatly, making up 50% or more of acreage.

*D. G. Wing, Mechanicsburg, for west central:* Planting date late, as corn not planted. Will be 20-25% cut in soybean acreage unless recent rain discourages farmers from planting June corn. Lincoln beans will be main crop this year. Still surplus of Lincoln seed in this locality.

#### WISCONSIN

*John P. Dries, Saukville, for Lake Shore region:* Planting date normal. 90% planted. Acreage cut 50% below 1945. Increase in corn ceiling caused substantial cut in bean acreage. Weather rather dry. Good seedbed. Moisture still available. Our acreage of soybeans will be planted to sweet corn because increase in corn prices discourages growing beans.

*Geo. M. Briggs, Agricultural College, Madison:* Planting date normal. 90% planted. Believe 1945 acreage up but impossible to tell. Weather conditions good. Some Lincolns in southern part.

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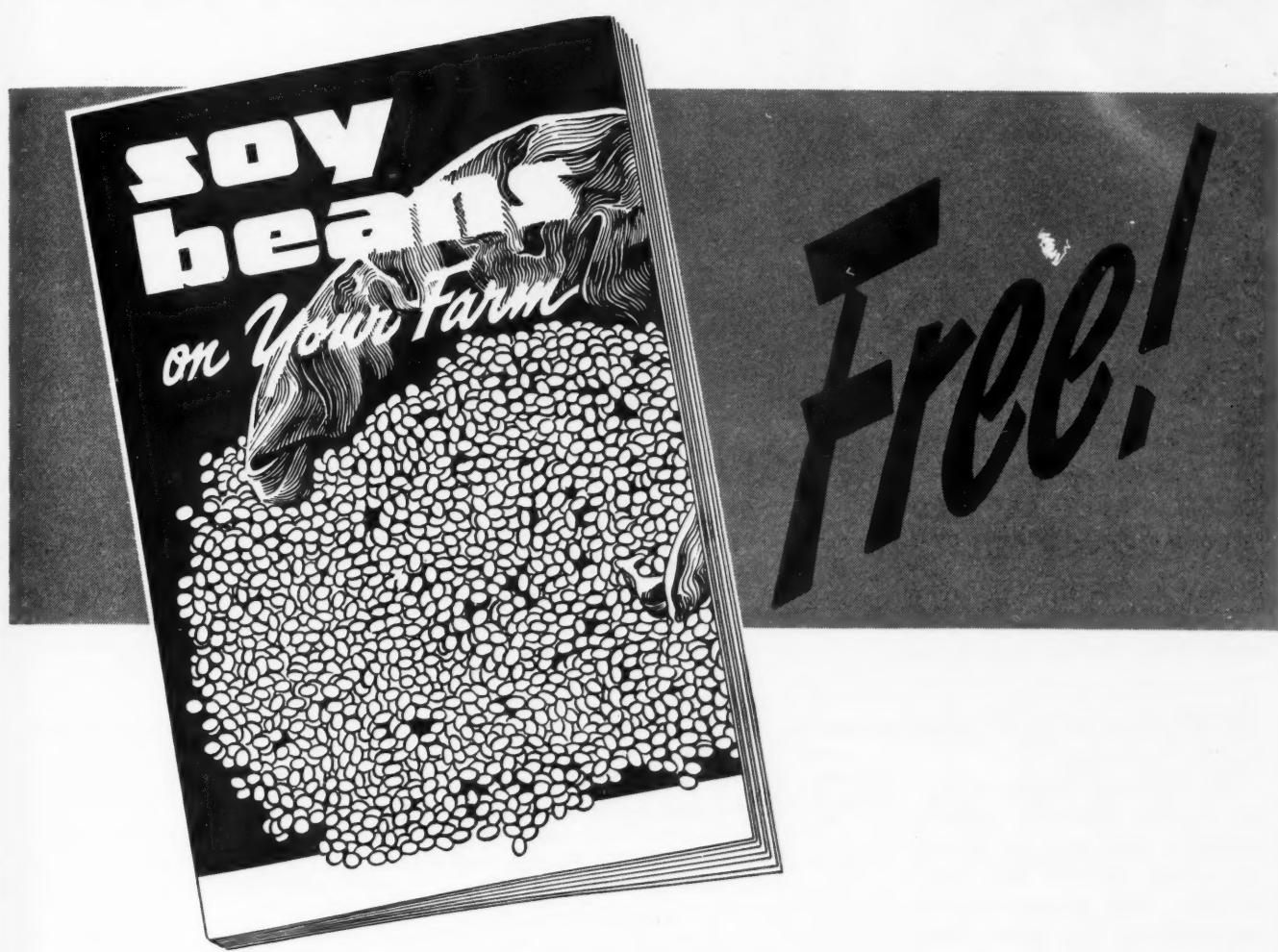
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## **USDA MEN WHO HAVE CONTRIBUTED TO SOYBEAN DEVELOPMENT**

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# **DAVID BREESE JONES**

A familiar name in soybean research is that of David Breese Jones. His 36 years of protein chemistry investigations have been starred by more than 100 published reports on soybeans, peanuts, cottonseed, and other crops valuable for protein in feeding man and beast.

In a world that seemed full of Joneses, he long ago took to stressing his middle name, and "Breese Jones" he's called by most of his scientific friends. With the name nowadays goes the title, head of the protein investigations laboratory of the Federal Bureau of Human Nutrition and Home Economics. The laboratory he directs is in the Maryland countryside, at Beltsville, where the U. S. Department of Agriculture maintains a large research center, about 16 miles outside the nation's capital.

### **LIKES TO TALK PROTEINS**

Dr. Jones is quiet-mannered, friendly . . . talks proteins with enthusiasm. He has been with the Department's protein investigations laboratory from the day it was started, in 1915, determining the amino acids that make up proteins in foods, testing their nutritive values. He and associates discovered the amino acid, lanthionine, which brought the number to 23. He believes there may yet be amino acids lurking undetected. A recent achievement was finding a short-cut way of determining two of the amino acids directly in the food. This technique means a saving of many hours of laboratory work.

Nowadays, his laboratory is learning how vegetable proteins can be combined to make highly nourishing blends. Strangely, these combinations are sometimes more nutritious than the sum total of the food

materials in them, like some curious sum where 2 and 2 make more than 4. Adding 15 parts of soy flour to white flour, for example, increases its protein values five-fold. This work has special significance in view of the world shortage of food for protein needs.

### **WORKED UNDER OSBORNE**

Vegetable proteins have been Dr. Jones' prime interest from the time he was a graduate student (1906-10) at Yale and working in the protein laboratory of "the greatest authority of those days on plant proteins"—Dr. Thomas B. Osborne of the Connecticut Agricultural Experiment Station.

Dr. Breese Jones belongs to a number of scientific societies. In 1938 he was a member of the Sixteenth International Physiological Congress, in Zurich, Switzerland. On that trip he made a detour to visit Wales, homeland of his parents. People he met were astonished that this American talked their language, for Welsh is hard, tongue-twisting speech for "foreigners." Davie Jones had learned it as a boy, back in his Wisconsin town, a place called Cambria—ancient name for Wales.

Just to keep your Breese Joneses of protein chemistry straight, there's a Dr. Chase Breese Jones, son of Dr. David. He's with the U. S. Department of Agriculture too—3,000 miles away from Maryland at the Western Regional Research Laboratory in Albany, Calif.

—s b d—

A spacious six-room house has been constructed by Farm Advisor Thurman Wright, of White County, Ill., from six dismantled soybean bins. He has been offered \$15,000 for the property.

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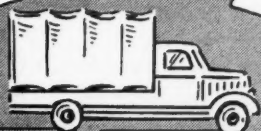
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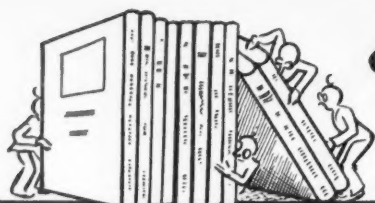
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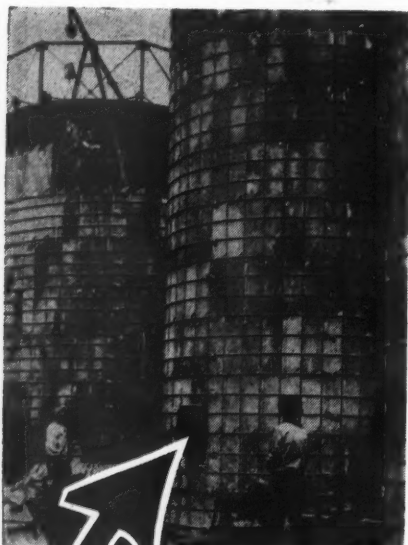


# Publications

## Growers

**SOYBEANS ON YOUR FARM.** 32 pages. Agronomy Department, Central Soya Co., Inc., Fort Wayne 2, Ind.

This very attractive, readable booklet summarizes the results of research and field



## ERECTING BINS FOR SOYBEAN STORAGE

Soybeans have arrived as a major crop — which means adequate storage facilities are needed in the soybean business. Neff & Fry super-concrete stave bins provide quick, economical storage. Hundreds erected the past five years and scores more going up. Any capacity required. Fast erection by trained crews. Every installation guaranteed. 1946 catalog explains super-concrete stave construction. Write. Also monolithic bins.

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tests by the General Soya agronomy department as well as the findings of the various experiment stations.

Here in brief and easily available form are the answers in the light of present knowledge to such questions as the relation of soybeans to: soil productivity, erosion, clover stands, weeds, direct fertilization, and crop rotations.

There is also a list of recommended varieties for Ohio, Indiana, Illinois, Iowa, and Missouri.

The authors say: "We have prepared this publication with the belief that the specialized knowledge and experience available through these agricultural agencies (experiment stations and agricultural colleges), if reviewed and presented, would not only be helpful to the soybean grower but should also give information of value in considering crop adjustments now that the war is over."

## Margarine

**LEGISLATION WHICH RENDER IT MORE DIFFICULT TO SECURE ADEQUATE NUTRITION.** Revised edition 1945. Compiled by Anton J. Carlson, University of Chicago.

This booklet, which contains extracts from many sources of the best published scientific evidence on the relative nutritive value of margarine and other food fats as compared with butter, was first published in 1943. It has been brought up to date by inclusion of important findings of competent investigators at the Universities of Wisconsin, Illinois, and Southern California in 1944 and 1945.

These findings verify earlier evidence to the effect that for all practical purposes margarine is the equal of butter not only in promoting growth but in reproduction and lactation as well.

The booklet contains a summary of the present restrictive federal and state taxes and licenses, and outright prohibitions against margarine.

Dr. Carlson states in his introduction: "The facts at hand today eliminate all questions as to the nutritive value of vitamin A fortified margarine as compared to butter, except as to the question of flavor. But the restrictive laws (federal and state) touching the production, distribution, and consumption of margarine are still on our statute books, and still render it more difficult for many people to secure adequate nutrition."

## Processing

**SOLVENT EXTRACTION OF OIL-SEEDS,** by W. H. Goss, Northern Regional Research Laboratory, before American Oil Chemists' Society.

Solvent extraction is the most modern and, in many cases, the most efficient commercial method of recovering vegetable oils from seeds. It has been used in the American oilseed industry chiefly for processing soybeans and to a smaller extent for removing oil from castor pomace, corn germ, and several other oleaginous materials.

The high efficiency of the process is offset to some extent by higher investment costs, and in many cases it has not found commercial application because of technological difficulties. In Europe, multiple-contact, counter-current extraction in batteries of batch-type extractors is the most common practice, but numerous continuous systems are also in use.

**PROCESSING OILSEEDS AND OILS IN GERMANY.** By W. H. Goss, Northern Regional Research Laboratory, before American Oil Chemists' Society.

German oilseed mills are usually equipped to process a wide variety of raw materials and therefore contain many types of equipment. Soybeans are practically always extracted with solvents, but other oilseeds are ordinarily forepressed one to three times in expellers and then extracted.

Many types of hydraulic presses, expellers, and both continuous and batch systems of solvent extraction are used. Refining is conducted batch-wise, in all steps, and is devoted primarily to the production of "hard oils" and "soft oils" for blending to manufacture margarine.

The Germans claim to have eliminated practically all the tendency of soybean oil to undergo reversion, employing special techniques to avoid "setting" the lecithin during extraction, thoroughly removing the phosphatides from the crude oil by repeated washings, and introducing citric acid during deodorization.

## Oil

**STUDIES ON THE RELATIONSHIP OF PHOSPHOLIPIDS TO FLAVOR STABILITY IN SOYBEAN OIL.** By Herbert J. Dutton, Helen A. Moser, Jean P. Earls, and John C. Cowan, Northern Regional Research Laboratory, before American Oil Chemists' Society.

The future of the soybean oil industry de-

pende in part upon increasing the flavor stability of edible soybean oil.

A procedure, which is reported to have been used by the German soybean oil refiners, has been tried on laboratory scale and appears to have distinct merit. It consisted in a particularly thorough degumming operation and a subsequent addition of a small amount of citric acid during deodorization. Oils treated in accordance with this method possessed a significantly higher flavor stability than those subjected to a conventional type of refining.

The observation that nitrogenous constituents are removed by the water washing is compatible with the hypothesis that phospholipids are responsible for the flavor instability of soybean oil.

## Diseases

**WILDFIRE DISEASE OF SOYBEANS**, by William B. Allington, associate pathologist, U. S. Regional Soybean Laboratory, in *Phytopathology*, Nov. 1945.

Wildfire, which is at least very closely related to the wildfire of tobacco, was observed in all the major soybean-producing areas, except possibly North Carolina, in 1943 or 1944.

The first specimen to come to the writer's attention was collected in northern Mississippi in July, 1943. In early August severe infections were found in Arkansas, Tennessee, Alabama and Georgia. In late August and early September of the same year infection was observed in Iowa, Illinois, Indiana and Ohio. In 1944, the disease was reported on soybeans from most of the North and South Central states.

Extensive infection in 1943 and 1944 was rare before August, but it is not known whether wildfire is typically a late season disease on soybeans.

The most extensive infection observed to date over a wide area was in central Iowa in August, 1944. Definite increase in the disease over the country has been observed in the last 2 years.

Symptoms are characteristic and consist of necrotic spots on the leaves, which are variable in size and are nearly always surrounded by a striking wide yellow halo.

**THREE IMPORTANT FOLIAGE DISEASES OF SOYBEANS — BACTERIAL BLIGHT, BROWN SPOT, AND BACTERIAL PUSTULE.** By S. G. Lehman, Associate in Plant Pathology, North Carolina State College, in *Research and Farming*.

Leaf spotting diseases of soybeans and the defoliation caused by them are often quite serious in North Carolina.

Bacterial blight was found in a surprisingly high proportion of the fields examined in North Carolina in 1945. Observations indicate that development of the disease is greater in cool seasons.

Soybean varieties commonly grown in

North Carolina show susceptibility to bacterial pustule. However, the varieties Ogden and Woods Yellow have consistently shown a high degree of resistance.

The most severe attacks of brown spot have been noted on Volstate and Woods Yellow.

Experiments are under way to determine if such diseases can be controlled by dusting soybean plants in the field. Preliminary results indicate that a high degree of control can be obtained by properly timed applications of dusts containing copper.

## Nigeria

**SOYA BEANS IN NIGERIA.** By J. K. Mayo, senior botanist, Department of Agriculture, Nigeria. *Tropical Agriculture*, December 1945.

Earlier attempts to grow soybeans in Nigeria and the Cameroons did not meet

with too much success. But scientists had been calling attention to the protein deficiencies in African diets and the need of protein concentrates for cattle feeding.

Since 1937 about 30 of the more promising tropical varieties, from Trinidad, British Guiana, Malaya, India, Philippines, Ceylon, Dutch East Indies, South Africa and the U. S., have been tried by the Nigerian Department of Agriculture.

Yields have varied from 6 to over 20 bushels per acre, probably due to soil and rainfall differences. Dr. Mayo points out the need for further variety trials, noting that work along this line has been very meagre compared with that of the U. S., for example.

Natives to date have not grown soybeans in Nigeria except under the direct encouragement of Europeans. They apparently consume few soybeans in their diets, except for some soybean milk in mission hospitals.

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# GRITS and FLAKES...

FROM THE WORLD OF SOY

W. H. Goss, assistant to the director of the Northern Regional Research laboratory, was the featured speaker at the Tri-States Oil Mill Superintendents Association in Memphis, Tenn., May 29-30, on the subject of solvent extraction.

\* \* \* \*

Former Lt. Commander Larry K. Droom has joined Roesling, Monroe & Co., Chicago, Ill., vegetable oil and soapstock brokers, the firm announces, after 4 years of active duty as a fighter pilot in the Pacific area with the Naval Reserve. Prior to the war he was in the petroleum and automotive business.

\* \* \* \*

Agronomy days featuring soybeans planned by the Iowa State College extension service in 1946 include the annual corn-soybean field day at the college September 18 and one at the Howard County Experimental Farm September 24.

\* \* \* \*

When Hotel Orlando, Decatur, Ill., heard the government's appeal to save wheat flour, it began making hot cakes, waffles and similar foods with a large percentage of soy flour. The American Hotel Association has publicized the idea to its members.

\* \* \* \*

*A factory and a 1½ acre site have been purchased by the California Pellet Mill Co. feeds. Chester K. Armstrong will manage the plant.*

\* \* \* \*

An agricultural mission of the U. S. Government, sent to confer with the Chinese National Government on a national farm program for China, will include an expert on soybean production. Dr. Claude B. Hutchison, vice president of the University of California, will head the mission.

\* \* \* \*

Dr. H. Douglas Tate, entomologist, and Dr. Travis W. Brasfield, plant pathologist and mycologist, have joined the staff of the U. S. Rubber Co.'s agricultural experiment station at Bethany, Conn. Both men will engage in research for new agricultural chemicals.

\* \* \* \*

Two new soybean varieties, Gibson and Chief, have been certified for the state of Kansas. The state's farmers now have the following varieties listed in order of their maturity dates: Dunfield, Chief, Gibson, Hong Kong and A. K.

\* \* \* \*

Former Lieut. (j. g.) Eugene E. Woolley has returned to the chemical division of General Mills, Inc., as assistant manager of Belmond operations in charge of manufacturing. Woolley saw active service at Iwo Jima and Okinawa Gunto as supply and disbursing officer on the USS Stephen Potter.

\* \* \* \*

*A factory and a 1½ acre site have been purchased by the California Pellet Mill Co. at Crawfordsville, Ind., to manufacture the equipment and machinery needed in pelleting feeds. Chester K. Armstrong will manage the plant.*

\* \* \* \*

Harold G. Gabrill, 47, sales manager of the soya products division of The Glidden Co., Chicago, died April 2 in a Cincinnati hotel from a heart attack. He was a resident of Grand Rapids, Mich.

\* \* \* \*

Recently introduced on test markets by the Kellogg Co., Battle Creek, Mich., are Corn-Soya Shreds made of ribbon milled corn and soya with sugar, salt and malt flavoring. The product is crisp and tastes like corn flakes, is packaged in Kellogg's usual red and green carton.

\* \* \* \*

Dr. O. E. May, who recently resigned as chief of the Bureau of Agricultural and Industrial Chemistry, U. S. Department of Agriculture, has joined the Coca-Cola Co. as an executive in their chemical control division.

\* \* \* \*

Those concerned with packaging and shipping will find of interest a new booklet issued by Bemis Bro. Bag Co., "Packaging Picture—The Story of Bemis Multiwall Paper Shipping Sacks." Copies are available from any one of the 33 of the firm's offices.

\* \* \* \*

*Almost 7 million pounds of soy products were used by breweries in 1945, reports MODERN BREWERY AGE.*



E. K. SCHEITER

## STALEY CO. ELECTS AT ANNUAL MEETING

E. K. Scheiter was elected executive vice president of the A. E. Staley Mfg. Co., Decatur, Ill., at the annual directors meeting May 14.

The Board also elected Dr. W. A. Kutsch as a vice president. President A. E. Staley, Jr. appointed Dr. R. E. Greenfield as general superintendent, the office formerly held by Dr. Kutsch, and W. B. Bishop as technical superintendent, the office formerly held by Dr. Greenfield.

Mr. Scheiter is also a director of A. E. Staley Manufacturing Co., and of A. E. Staley Manufacturing Co. Ltd. (London). He is a director and member of the executive committee of the National Soybean Processors Association. Born in Decatur, Ill., he went to work for Staley's as a clerk in the accounting department soon after his graduation from high school in 1919.

Dr. Kutsch has been a director of Staley's since 1935, having joined the company as general superintendent in 1928.

Dr. Greenfield joined Staley's in 1926 as a chemical engineer and was appointed assistant general superintendent in 1935.

— s b d —

## SORENSEN HEADS OIL CHEMISTS' SOCIETY

New president of the American Oil Chemists' Society, elected at the annual meeting held in New Orleans on May 15-17, is S. O. Sorensen of the Archer-Daniels-Midland Co., Minneapolis, Minn. He was first vice president and membership chairman last year.

Serving with him for 1946-47 are R. T. Milner as first vice president, moving up from the second vice presidency. Dr. Milner

is head of the analytical and physical chemistry division of the Northern Regional Research Laboratory, Peoria, Ill.

H. E. Longenecker, second vice president, is dean of the graduate school, University of Pittsburgh. C. P. Long, third vice president, is chemist in the analytical methods section of Procter and Gamble, Cincinnati. L. B. Parsons, fourth vice president, is chief chemist for Lever Brothers, Cambridge, Mass.

Re-elected were H. L. Roschen, secretary, of Swift and Co., Chicago, and J. P. Harris, treasurer, of the Industrial Chemical Sales division, West Virginia Pulp and Paper Co., Chicago.

— s b d —

### TORRENCE REJOINS THE LINK-BELT CO.

George P. Torrence will rejoin the Link-Belt Co., July 1 as executive vice president and will succeed William C. Carter as president in November, it has been announced following a special meeting of the board of directors.



Mr. Carter will become chairman of an executive committee composed of himself,

Howard Connley and Russell Livermore.

Mr. Torrence was with the Link-Belt firm from 1911 to 1936, since when he has been associated with the Rayon Machinery Co. and the Cleveland Pneumatic Tire Co.

— s b d —

### BERGER PRESIDENT FEED MANUFACTURERS

Walter C. Berger, until recently in charge of U. S. Department of Agriculture's feed distribution program, was elected president of the American Feed Manufacturers Association at French Lick, Ind., May 21, succeeding Ralph M. Field, Chicago, who was retired to the post of secretary.

Mr. Berger will take office July 1.

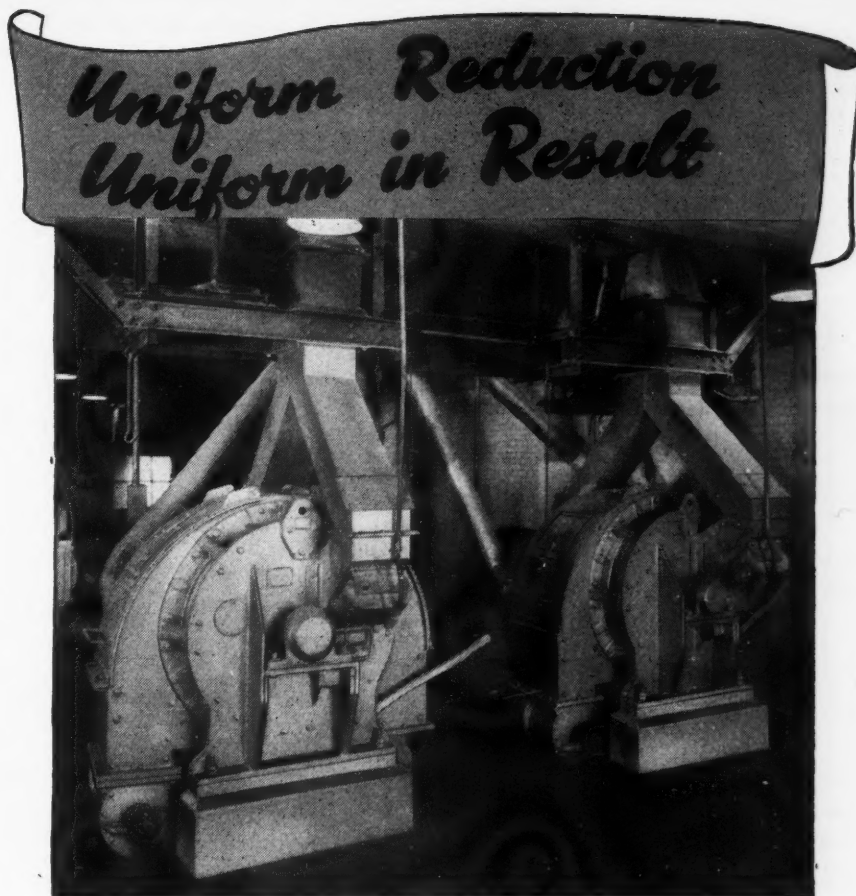
New members of the board of directors included D. J. Bunnell, McMillen Feed Mills, Fort Wayne, Ind.; Harold J. Buist, Allied Mills, Chicago; and C. S. Johnson, Ralston Purina Co., St. Louis.

— s b d —

### NEW HIGH PURITY NORMAL HEPTANE

The availability at comparatively low prices in drum or tank car quantities of another paraffin hydrocarbon (normal heptane) of exceptional high purity has been announced by the chemical products department of Phillips Petroleum Co., Bartlesville, Okla. Preliminary examination of production stream samples indicate the purity of the normal heptane to be over 99 mol percent.

The manufacture of pure normal heptane is an outgrowth of the prior development  
(Continued on page 26, Col. 2)



## Maintaining Standards of Output

### Prater Dual Screen Dual Feed Pulverizer

In every stage of the soybean processing cycle, where reduction is involved, maintaining output at proper standards of quality and yield depends upon control of the reduction process.

Improper reduction disturbs the cycle, affects both quality and yield. Proper reduction is uniform reduction that maintains the standard of efficiency developed in the process.

Prater Service will aid you in establishing proper reduction standards through engineering analysis, co-operative study, test grinds with particular reference to uniformity, control of grain size and quality of the grind. Once established, Prater Pulverizers will unfailingly maintain those standards.

For complete information address:

INDUSTRIAL DIVISION

## PRATER PULVERIZER COMPANY

1501 South 55th Court

Chicago 50, Illinois



The recent ruling of a Federal court that soya butter is margarine has made the Michigan Retail Grocers and Meat Dealers Association liable for \$100,000 in back license fees required of the handlers of colored margarine, it was revealed at the organization's annual meeting.

\* \* \* \*

Food technologists at Massachusetts State College report that rats fed mushrooms as a sole source of protein did not grow so rapidly as those fed soybean oil meal. This is not surprising, for the protein content of mushrooms is only 2.67 percent. However, mushrooms contain all the essential amino acids, these workers say.

\* \* \* \*

Sale of Western Soybean Mills and its sales organization, Sioux Sales Co., both of Sioux Falls, S. Dak., to Sioux Industries, Inc., has been announced. Directors of the new corporation, recently capitalized at a million dollars, are Henry M., Philip and Mike Sherman, E. N. Grueskin and Maurice Miller, all of Sioux City, Iowa. E. A. Woodward, general manager, will remain with the organization.

\* \* \* \*

Among 15 chemurgic projects to be undertaken by University of Nebraska scientists will be work with safflower, castor beans, sesame, perilla, sunflowers and chia. The projects will also include development of better varieties of soybeans.

\* \* \* \*

National Soya Foods, Inc., New York City, has been chartered to import and export foods and food products.

\* \* \* \*

Walter W. McLaughlin, vice president of the American Soybean Association and former president of the American Society of Farm Managers and Rural Appraisers, recently resigned from Decatur Farm Management, Inc., to open his own farm management service, the McLaughlin Agricultural Service, Inc. The firm is located in the Citizens Bldg., Decatur, Ill.

\* \* \* \*

Soybean acreage and production maps for 1945 for Illinois, Indiana and Ohio have been issued by the Nickel Plate Road. Maps show production and acreage grown and harvested for each county. Processing plants are starred.

\* \* \* \*

George C. Thomas, vice president in charge of nutritional staff of McMillen Feed Mills, Fort Wayne, Ind., became associated with Hubbard Milling Co., Mankato, Minn., June 1.

\* \* \* \*

An ultra-modern research and development paint laboratory has been put in operation by the Glidden Co., at its main plant in Cleveland. It is staffed by 40 chemists and research technicians under the direction of T. A. Neuhaus.

\* \* \* \*

Forty oil mills at Tientsin, China, are reported functioning far below capacity because of last season's low production of oil seeds, largely soybeans.

\* \* \* \*

Marvin Narramore, who was in charge of oil meal sales for the Des Moines, Iowa, plant of Spencer Kellogg & Sons, Inc., before his entrance into the armed services 2 years ago has been discharged and has returned to his home at Des Moines. Mr. Narramore saw action with the 7th Army in the Saarland.

\* \* \* \*

Link-Belt Co., Chicago, has announced the opening of three new sales offices, at 1608 Fifth Ave., Moline, Ill.; 730 Temple Bar Bldg., Cincinnati, Ohio and 823 Comer Bldg., Birmingham, Ala.

\* \* \* \*

Seedburo Equipment Co., announces the addition of R. D. Harst to its staff in its Chicago office to assist in the further development of customer service through market research and new product development.

\* \* \* \*

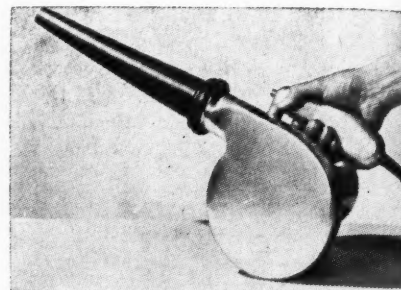
A frozen soy cream for whipping and baking is "Whip Topping," manufactured by Rich Products Corp., Buffalo. Distributor is Famous Frosted Foods, New York.

\* \* \* \*

A bill to permit the manufacture and sale of margarine as a substitute for butter has been rejected by the Canadian Senate at Ottawa.

of a less pure grade of normal heptane for solvent uses, a product which has found large scale application. Interesting possibilities immediately suggest themselves for more exacting solvent applications with this very pure normal paraffin hydrocarbon boiling at 209 F.

— s b d —



Above is shown the 42-A Seedburo Dust-Tight Blower, a recent addition to the Seedburo Equipment Co.'s line of electric blowers. This new type blower is designed to eliminate the possibility of a dust explosion caused by a motor that is not totally enclosed. It is especially recommended for use in grain elevators, feed houses and flour mills. Full information may be obtained from the firm at 223 W. Jackson Blvd., Chicago 6.

— s b d —

## PILLSBURY PROMOTES ERNEST S. SCOTT

Ernest S. Scott, well known figure in feed mill engineering for more than a score of years, has been appointed chief engineer of Pillsbury Mills, Inc., feed mills division, it is announced by Clyde H. Hendrix, vice president in charge of the division.

Scott will be in full charge of engineering for all the company's formula feed and soy operations. Joining the Pillsbury organization in the fall of 1943, he has been engaged in mill engineering at Clinton and Centerville.

ERNEST S. SCOTT




SOYBEAN DIGEST


# Styled to Fit the Job—

Yes, Percy Kent makes burlap bags, too—for, in some jobs, burlap bags are preferred.

You wouldn't wear a business suit if you had to dig ditches . . .

You'd wear clothes "styled to fit the job"—clothes that could "take it!"

That's the idea behind the manufacture of  Burlap Bags. They're made to take the rough handling of loading and unloading—the wear and tear of long shipment.

For over 60 years, it has been a  policy to provide "always something new" in bag design — in bag material. It's a policy that will continue to give you bags styled to fit your particular product.

*Always  
Something  
New*



**PERCY KENT BAG COMPANY, INC.**

Manufacturers and Designers of Cotton, Burlap and Paper Bags  
KANSAS CITY • BUFFALO • NEW YORK • WICHITA • MINNEAPOLIS • CHICAGO • OKLAHOMA CITY

# WASHINGTON Digest

## "Budget" for Fats, Oils

Production and Marketing Administration plans shortly to issue a 1946-47 "budget" on fats and oils, showing estimated supplies for the 12-month period and tentative allocation of the total supply among the major classes of users.

The so-called "budget" will follow the general pattern of that recently announced for wheat, and will be adopted for all the major famine-relief commodities.

It represents a part of PMA's program to blueprint and budget supply and intended disposition of the major famine commodities, so both the U. S. public and the claimant countries will know what to expect during the marketing year.

Latest report of the Bureau of Agricultural Economics shows declines in domestic production, exports and imports of fats and oils this year, and a further drop in domestic output indicated for 1947.

Production of fats and oils from all domestic sources this year is forecast at 9,250 million pounds, about 2 percent less than in 1945. The decline is attributed to lower output of butter and cottonseed oil more than offsetting an increase in lard, linseed oil and grease.

The Bureau estimates 1947 output of domestic fats and oils will drop 5 to 10 percent below this year, due to the below average soybean-corn and flax-wheat price ratios, and an expected sharp drop in the fall pig crop because of feed price advances.

The tentative 1946 allocations of fats and oils for export is 967 million pounds, compared with nearly 1.6 billion pounds in both 1943 and 1944, and about 1.1 billion pounds last year.

Fats and oils procurement for export was on schedule up to May 17 (date of the last official report), with a total of 131,000 tons made available out of the 174,000 tons allocated for the first 6 months of the year.

As of that date, procurement of lard and shortening was lagging behind schedule, while procurement of soybean and peanut oil, coconut oil, margarine and soap was running considerably ahead.

On the import side, shipments of fats and oils into the U. S. are expected to drop this year for the second year in a row, despite improvement in copra supplies from the Philippines.

April exports of copra from the Philippines came to 24,000 long tons, compared with 14,000 in March, 12,000 in February, and 8,000 in January. About two-thirds of the Philippine export copra is allocated to the United States, the remainder to other countries.

W. H. Jasspon, head of the fats and oils branch, is still in Argentina attempting to negotiate for Argentine flax. Commodity Credit Corporation is authorizing an increase in the price of flax purchased from Uruguay from \$2.26 to \$3 a bushel. The deal probably will be extended to Argentina in an effort to meet Russian competition.

Because of a desire to return copra import business to commercial operators, USDA is terminating operations of the Copra Export Management Co. June 30.

CEMCO, composed of five American export companies operating in the Philippine islands, was organized originally by the Foreign Economic Administration to re-establish Philippine copra trade. Later its operations were taken over by the Department of Agriculture when Secretary Anderson complained that rehabilitation work wasn't going ahead rapidly enough.

Under the new setup, USDA will continue to make all purchases of Philippine copra for foreign claimants, and imports will still be subject to import control and ceiling price regulations.

## By PORTER M. HEDGE

Washington Correspondent for  
The Soybean Digest

## Price Story

Production and Marketing Administration isn't saying officially whether it will, or will not, increase the price support for 1946 soybeans, but unofficially it implies that there will be no raise.

A boost in price support was considered immediately after announcement of higher price ceilings for grains and protein feeds. A few conferences were held, then the matter was dropped.

Most officials say privately that they don't expect an increase in price support, since it is too late now to have any effect on 1946 plantings.

Main reason advanced for letting the price support stand at its present \$2.04 a bushel is that a high price floor would either increase the subsidy cost or force higher protein meal and vegetable oil ceilings.

## Protein Set-Aside

The protein meal set-aside for government-directed distribution into "shortage" areas is expected to continue at 10 percent of monthly production well into the fall months when the new oil crops will be coming on in quantity.

Government-directed shipments through May 31 totalled 129,000 tons to a total of 39 states.

Through an error in transcribing notes, this column last month reported that about 36 million tons of edible tallow and oleo oil were used in soap making last year. The correct designation should have been pounds, instead of tons.

**W**E are equipped to grind and corrugate mill rolls up to 19 inches in diameter by 60 inches long. After July 1 we will be equipped to grind rolls 36 inches in diameter by 200 inches long, overall. Mirror finish for fine grinding, velvet finish for capacity.

Your patronage solicited.

Prices on request.

**Mc. Grinding & Corrugating Works**

E. G. McCLINTIC, Owner

2827-29-31 Terrace St., Kansas City 8, Mo.



# ZIMMERMAN ALDERSON CARR COMPANY

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Intelligent and Honest Brokerage Service Since 1908

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## CUBA LIFTS VEGETABLE OILS, FATS DUTIES

Duties and fees on edible vegetable oils, fats, and oilseeds imported into Cuba were waived until June 30, 1946, by a recent executive decree, reports *Foreign Crops and Markets*. One of the purposes of this measure is to aid the import of soybean oil from the United States so it can be sold within Cuban ceiling prices.

The cost to Cuban importers was increased 4 cents per pound for refined soybean oil because of the United States processors' subsidy collected on exported soybean oil since January 1, 1946.

In addition, it is hoped that the decree will make possible the import of other oleaginous commodities for sale under local ceiling price.

— s b d —

Sarelon is a new peanut protein fibre developed by the Southern Regional Research Laboratory, New Orleans.

## Market Street

We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

Rate: 5c per word per issue.  
Minimum insertion \$1.00.

PERFECT LOCATIONS for growing oil producing soybeans, marvelous climatic conditions, established markets and crushing plants, reasonably priced land. For information about the Louisville and Nashville Railroad Company's Gulf Coast territory write E. J. Hoddy, General Development Agent, Desk B-2, Room 108, L & N Building, Louisville 1, Ky.

MILLION-DOLLAR food corporation will buy factories processing soybean products. Emrich Investment Co., broker, Lambert corner Garfield, Cleveland 12, Ohio.

# Swift's Soybean Oil Meal



And Swift's Soybean Oil Meal is certainly clicking with feed manufacturers, feed mixers and feed dealers. That's because it's (1) a high-quality protein base for livestock and poultry feeds. (2) It adds appetite appeal. (3) It gives the right balance to your formulas. (4) It is always uniform in quality and gives dependable results.

When buying Soybean Oil Meal from—or when selling soybeans to—Swift & Company, you can rely on Swift's prompt, friendly service.

## SWIFT & COMPANY

Mills at: Champaign, Ill. Cairo, Ill.  
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Refiners of Vegetable Oil

MANUFACTURERS OF VEGETABLE OIL  
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Salad Dressings

Shortening  
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WE SOLICIT OFFERINGS OF SOYA BEANS

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**ABUNDANT YIELDS**  
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HIGH GRADE  
**SOYBEANS**

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PHOSPHATE  
ROCK**

There's nothing like it for combining 1st year results, economy and long lived effectiveness. Since 1897 the best soil builder —the cleanest, highest grade, most finely ground, quick acting natural phosphate. Naturally demand is heavy.

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MT. PLEASANT, TENNESSEE



Quality — Appearance — Strength — these factors are all "in the bag" when you use FULTON BAGS for your meal, pellets and feeds. FULTON artcraft printing of your brand is a valuable sales aid. Remember, too, that your soybean meal will not heat when stored in cotton bags. For the best in cotton bags, always specify FULTON.

**FULTON BAG & COTTON MILLS**

*Manufacturers Since 1870*

Atlanta St. Louis Dallas Minneapolis Denver  
New Orleans Kansas City, Kan. New York

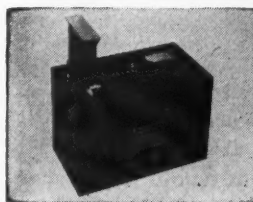
## from RAW COTTON to FINISHED BAGS..

FULTON BAGS made in our plants from the raw cotton to the finished bag assures you a safe and economical container for shipping soybean meal.



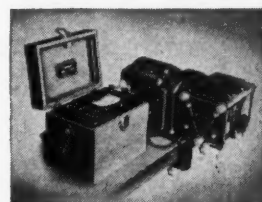
# NOW IS THE TIME TO ORDER YOUR TESTING EQUIPMENT

Don't wait until the grain harvest season is upon you. Check your grain testing equipment now . . . make sure it is complete and in working order. We suggest you check the items below and also our catalog and reference book for equipment you may need. Seedburo equipment is used by Federal Grain Supervision Offices, State Grain Inspection Departments, Board of Trade Sampling Departments, and leading elevators, mills and testing laboratories throughout the world. All of our testing equipment is precision built by experienced craftsmen. Government standards are strictly adhered to where specifications are available.



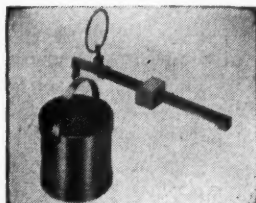
## STEINLITE

A one minute Moisture Tester. EASY TO USE . . . like tuning a radio. Operates on the radio frequency impedance principle, and is checked against official oven methods. Sold on 10-day trial basis. No money down. Immediate shipment. Standard Grain Unit and Special Models. Fully guaranteed.



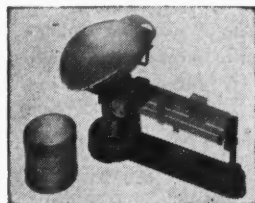
## TAG METER

A rapid electrical method of determining moisture content of grain. Calibrated against the air oven which has been accepted by the U. S. Department of Agriculture. For corn it is calibrated against the water oven method. Requires no weighing of the sample. Used only on whole grains.



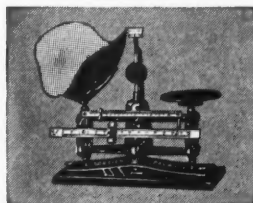
## 1 QUART TESTER

No. 26—One quart (Government Standard) weight per bushel tester. Relief etched beam. Beam divided to give rapid readings of weight per bushel, percentage of loss in cleaning and direct weight of sample. Dent-proof, heavy gauge bucket. Built to withstand rough usage with constant accuracy.



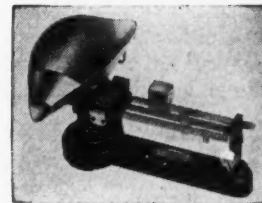
## 4-IN-1 SCALE

No. 500—Used for weighing samples, for moisture tests, for determining test weights per bushel, dockages, weighing mail. Capacity 610 grams, sensitivity rated 1/10 gram divisions, back beam 0 to 500 grams x 25 gram divisions. Also 0 to 100% x 1%, 0 to 17 1/2 x 1/2 oz., 0 to 70 lbs. x 1 lb. div.



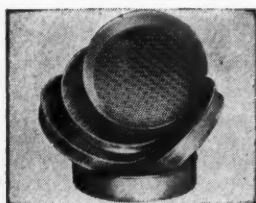
## TORSION BALANCE

No. 6200—For quick and accurate grading of wheat, oats, rye, etc. Designed in accordance with the suggestions of and supplied to the U. S. Department of Agriculture, Grain Industry, etc. Used for determining test weights, per bushel, for moisture tests, dockages and for damaged kernels.



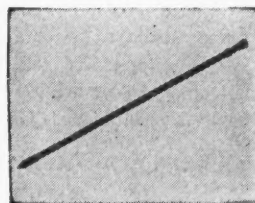
## GRAM SCALE

No. 499—For weighing out samples in making moisture tests. Polished, seamless scoop. Capacity 1110 grams. Sensitivity rated 1/10 gram—actual 1/20 gram. Front beam 0 to 10 grams x 1/10 gram div.; Center beam, 0 to 100 grams x 10 gram div.; Back beam 0 to 1000 grams x 100 gram div.



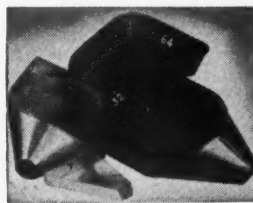
## GRAIN DOCKAGE SIEVES

Manufactured to comply with the specifications of the U. S. Department of Agriculture. Made of No. 20 gauge B & S aluminum, and measures 13 inches in diameter, 1 3/4 inch inside depth, telescoping. Available in Commercial and also Precision grades. Write for list of perforations available.



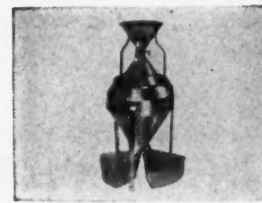
## GRAIN PROBES

No. 22-S—The standard probe for sampling grain in railroad cars. 63" Government Special Probe, double tube brass, wooden handle, 1 3/4" outside diameter, 11 openings, extra heavy bronze point with double partitions. We make probes to order. Send us your specifications.



## SAMPLE PANS

Used to handle and file samples in the laboratory for grading and testing grain and seed. Constructed for convenient pouring of sample for weighing on scales, making weight per bushel tests, dockage tests, etc. Available in various sizes. Standard in every respect. Write for complete information.



## BOERNER SAMPLER

No. 34—Used to reduce the size of a sample of grain containing foreign substances of different specific gravity or size than of the grain with which they are mixed. And at the same time obtain a sample as representative of the original. Made to conform with Government specifications.

## COMPLETE STOCK—EQUIPMENT & SUPPLIES

Used in testing and handling grain, seed, beans, flour, coffee, tobacco, sugar, soap, starch, cottonseed, meal, and others. All merchandise fully guaranteed. Write today for your copy of the Seedburo Catalog and Reference Book.

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machine..."*

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**H**ERE is a utility unit which fits into your requirements. It can be installed wherever handy, to take care of regular production in small plants or as stand by equipment in large plants. It can be used on almost any type of bag, however handled.

The standard unit consists of a built-in motor, thumb-control, automatic brake, thread cutter, thread stand, and either a tandem pulley suspension system or Top Lock Thor Balancer. It comes equipped with a Class 80600 enclosed type sewing head for heavy duty or a Class 14500 for medium to heavy work. Each type of head makes either a chain or a double locked stitch. Write today for full information on ALL types of bag closers in the New Bulletin No. 200.

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### UNION SPECIAL Bag Closing Machines

## SHARK SKIN Filter Paper

is being used to full satisfaction by many soybean and other vegetable oil mills.

Have you tried this material in your presses?

Full-size sheets for tests gladly furnished  
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## In The MARKETS

### QUARTERLY DISAPPEARANCE IS LARGEST OF RECORD

Soybean supplies on April 1 were 10 percent smaller than a year ago, reflecting the largest disappearance of record, the grain branch of the Production and Marketing Administration reports.

Soybean stocks on April 1 amounted to 97.9 million bushels compared with 109.5 million last year and 109.4 million two years ago. Supplies on farms and at processing plants were larger than a year ago while supplies in other positions were much smaller. Farm stocks on April 1, 1946, amounted to 29.8 million bushels or more than 2 million bushels larger than on April 1, 1945. Processing plants reported 37 million bushels of soybeans on hand April 1, an increase of a little less than 5 million bushels over last year. Stocks of soybeans at interior mills, elevators and warehouses were 12 million bushels less than a year ago and totaled 18 million bushels while commercial supplies at terminal markets were 4 million bushels smaller and amounted to 12.7 million bushels. Supplies of soybeans held by Commodity Credit Corporation in its own steel and wooden bins had dwindled to only 25,000 bushels by April 1 from the 2,762,000 bushels held a year earlier.

Reflecting a large demand for crushing and export, disappearance of soybeans, October through March this season, was the largest of record and amounted to 101.6 million bushels compared with 95.2 million bushels last season and 96.3 million bushels in the same months of the 1943-44 season. Disappearance in the January-March quarter totaled 56.1 million bushels compared with 45.4 million in the October-December quarter. Last season disappearance during the January-March quarter amounted to 48.3 million bushels.

Crushings of soybeans for oil, as reported by the Bureau of the Census, totaled 84.7 million bushels October through March of this season. This compares with 73.3 million bushels crushed in the comparable months last season and 73.6 million during the same months of 1943-44. Consumption of soybeans for crushing for flour and grits in the January-March quarter more than doubled the previous quarter and totaled nearly 2 million bushels. This compares with 792,000 bushels in the October-December 1945 quarter and 547,000 in the January-March 1945 quarter. Exports of soybeans January through March declined from the previous three-month period and totaled 557,000 bushels as against 1,868,000 bushels during October-December 1945. Last season exports of soybeans totaled only 235,000 bushels October through March.

The quality of the 1945 crop is a little better than the previous two crops according to inspectors' reports. Of the inspected receipts, October through April, 92 percent graded No. 2 or better this season compared with 87 percent for the same months for the two previous seasons.

#### STOCKS OF SOYBEANS, APRIL 1, 1946, WITH COMPARISONS

Position	Apr. 1 1945	Jan. 1 1946	Apr. 1 1946
	Thousand Bushels		
On Farms .....	27,571	43,363	29,785
Int. M. E. & Whses. (1) .....	30,612	39,572	18,177
Process Plants .....	32,640	46,225	37,249
Ter. Mkts. ....	16,508	24,423	12,666
Steel & Wooden Bins .....	2,762	400	25
<b>TOTAL ALL POSITIONS .....</b>	<b>109,493</b>	<b>154,013</b>	<b>97,902</b>

#### STOCKS (1)—OF SOYBEANS IN INTERIOR MILLS, ELE- VATORS AND WAREHOUSES APRIL 1, 1946, BY STATES, WITH COMPARISONS

State	Apr. 1 1945	Jan. 1 1946	Apr. 1 1946
	Thousand bushels		
Ohio .....	2,324	2,744	1,351
Indiana .....	2,840	4,538	2,486
Illinois .....	14,630	18,806	8,444
Michigan .....	85	191	110
Minnesota .....	198	650	339

Iowa	9,229	11,070	4,768
Missouri	123	645	169
Nebraska	52	14	8
Kansas	168	219	76
Virginia	10	35	21
North Carolina	100	126	81
Mississippi	26	46	25
Arkansas	14	43	27
Other States	213	445	272

U. S. . . . . 30,012 39,572 18,177  
 (1)—Excludes stocks in processing plants enumerated by the Bureau of the Census and stocks at 46 terminal markets reported by War Food Administration.

● **ANALYSIS OF SOYBEAN PRODUCTS.** A summary of analyses of soybean samples by Woodson-Tenent Laboratories during April.

Average Chemical Analysis of Soybeans Grown in Tennessee, Arkansas, Mississippi, Missouri			
OIL (Oil calculated to 14% moisture.)		Oil Yields per bu. *	
		%	lbs.
Grand average	18.0	8.3	
Month's highest	18.8	8.9	
Month's lowest	17.0	7.7	

Average Chemical Analysis of Soybeans Grown in Minnesota, Wisconsin, Michigan, Ohio, Indiana, Illinois Iowa, Kentucky, Virginia, Kansas, Nebraska			
OIL (Oil calculated to 14% moisture.)		Oil Yields per bu. *	
		%	lbs.
Average	17.4	8.0	
Month's highest	18.7	8.8	
Month's lowest	15.5	6.8	

SOYBEAN OIL MEAL				
Grand Average of All Soybean Oil Meal Analysis				
Moisture	Oil	Protein	Standard	
Average . . . . . 12.47%	4.63%	43.66%	55	
Month's best . . . 14.20	3.46	44.44	40	

ANALYSIS OF SOYBEAN OIL				
	F.F.A.	Gardner Break	Moisture & Volatile	Refining Loss
Average	0.9%	1.01%	0.15%	7.9%
Month's Best	0.5	0.47	0.09	7.8
				Color (red)
				8.1

● **INSPECTIONS.** Inspected receipts of soybeans in April totaled about the same as for the preceding month and continued high in quality, according to inspectors' reports to the Grain Branch of the Production and Marketing Administration.

April inspections totaled 4,501 cars compared with 4,644 cars in March. The average for the month of April for the crop years 1940-44 was 4,287 cars. Inspected receipts for October-April this season were 76,252 cars compared with 68,588 cars for the same period last season.

The quality of soybeans inspected in April continued high, 95 percent grading No. 2 or better compared with 94 percent in March.

April inspections included the equivalent of 36 cars inspected as cargo lots and truck receipts equivalent to about 30 cars.

● **SHORTENING PRODUCTION.** Production of shortening in 1945 was greater than in 1944, reflecting the low supplies of lard. Including ex-quota production, shortening output in 1945 was 1,449 million pounds, 85 million more than the 1,364 million pounds produced in 1944, and about 100 million more than average 1939-43 output, reports Bureau of Foreign and Domestic Commerce, Department of Commerce. Production in 1945 undoubtedly would have shown a much greater increase if production for civilian use had not been limited under War Food Order 42.

Continuing the trend of the war years, use of soybean oil in the manufacture of shortening increased in 1945, while use of cottonseed oil declined slightly. Consumption of soybean oil in shortening amounted to 683 million pounds, 50 percent of total primary fats and oils for that purpose and an increase of 63 million pounds over the quantity used in 1944.

Cottonseed oil consumed in shortening manufacture in 1945 rep-

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resented 35 percent of the total, and amounted to 487 million pounds, a decline of 3 million pounds from the preceding year. Use of lard in shortening manufacture amounted to 23 million pounds, declining from the 39 million pounds consumed in 1944, when lard was made available for ex-quota use for about six months of the year.

• **MARGARINE PRODUCTION.** Margarine production of 613 million pounds in 1945 very nearly equalled the 1943 all-time record of 614 million and was 4 percent higher than the 588 million pounds processed in 1944, reports Bureau of Foreign and Domestic Commerce, Department of Commerce. Output of uncolored margarine totaling 514 million pounds in 1945, showed an increase of 7 percent over the 1944 figure, and exceeded the previous peak of 1943 by 16 million pounds. Further reflecting the greatly increased domestic demand during the war period, 1945 production of uncolored margarine was 46 percent higher than the 1937-41 average.

This high level of operations during 1945 was possible chiefly because of the liberal quotas governing use of fats and oils by that industry during the first 6 months of the year.

Of the 499 million pounds of fats and oils all from domestic sources, consumed in margarine manufacture during 1945, cottonseed oil and soybean oil supplied 92 percent. Use of cottonseed oil, 254 million pounds, was greater than in any preceding year. Utilization of soybean oil declined slightly from the 1944 peak, comprising 207 million pounds in 1945, compared with 211 million in the preceding year.

• **COMMERCIAL SOYBEAN STOCKS.** Production and Marketing Administration's commercial grain stock report.

### U. S. Soybeans in Stock and Afloat at Domestic Markets (1,000 Bu.)

	May 7	May 14	May 21	June 4
Atlantic Coast .....	109	105	101	191
Gulf Coast .....	63	88	88	88
Northwestern and				
Upper Lake .....	1,286	1,269	1,227	933
Lower Lake .....	3,458	3,071	2,266	2,266
East Central .....	2,834	2,578	2,256	1,948
West Central				
Southwestern & Western	966	894	818	745
Total current week .....	8,716	8,005	6,756	6,081
Total Year ago .....	11,986	16,727	16,007	8,772

• **FATS AND OILS EXPORTS.** A total of 174,000 tons of fats and oils was allocated by Commodity Credit Corporation between January 1 and May 17 for delivery to UNRRA and European countries, U. S. Department of Agriculture announced.

Allocations included: lard 136,518 tons; soybean and peanut oil 10,128; coconut oil 12,500; shortening 1,214; and margarine, 6,769.

• **STANDARD SHORTENING SHIPMENTS.** By members of Institute of Shortening Mfgs., in pounds.

May 4 .....	6,444,156
May 11 .....	7,422,797
May 18 .....	7,578,352
May 25 .....	6,458,685
June 1 .....	5,738,025



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